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Cover: Adult Yellow-crowned Night Heron in Red Cedar at Pines, Smith I., Md., May 30, 1978. Photo by A. M. Tolzman.



SUMMER BIRDS OF LOWER CHESAPEAKE BAY ISLANDS IN MARYLAND

Henry T. Armistead

INTRODUCTION

This report is a detailed record of observations made on a trip to Smith Island, May 27-June 2, 1978, with Gus Tolzman and Penn Chu. Observations were made at each hammock, and all islands were visited from the Maryland-Virginia line up to and including Hooper and Barren Islands (Fig. 1). I have included a very brief sketch of each site with citations to my previous writing about them, if such exists. Noted are colonially nesting birds, other birds, the most obvious vegetation, and my findings in 1978 as well as in previous years. All my trips to the islands were made in a 14-foot fiberglass boat, the "Ibis," acquired in 1961 and powered by an 18-horsepower outboard, purchased in 1967.

In 1978 I was able to make the most thorough bird survey since first going out to the islands in 1967. For the islands north of the area covered by this report Jan. G. Reese is the best authority, while the Virginia part of the Bay is best known to Frederic R. Scott.

Areas I regret missing in 1978 are Janes Island State Park and Cedar Island Wildlife Management Area, north and south of Crisfield, respectively. While lacking the charisma of true Bay islands, they are sufficiently insular to rank in interest with them as are other Somerset County mainland spots such as Fairmount and Deal Island Wildlife Management Areas, which I try to poke around in every year in June. Other mainland locations that impinge on the aura and area of this report are Hooper Island, the Bishop's Head Hunting Lodge area, and the Elliott Island Road, all in Dorchester County. These are sufficiently isolated from truly mainland areas by large stretches of water and/or salt marsh to nurture truly insular phenomena and moods.

Since this is a rather personal report, I have gone into some detail on non-ornithological points that may seem to be diversions or trivia: beautiful places of wonder that these islands are. After the introductory section with its 6 summary tables are descriptions and maps of 51 sites. Finally, there are lists of references and plants (with scientific names) and tables 20-21 with 53 bird lists from 29 sites.

One conclusion I have reached from poking around out there is that the disposition of the colonial birds is in a constant state of flux. Each year they have a different set up. Colony site and composition change, often radically, from year to year. This, plus the constant erosion and diminution of the islands, make it seem important to monitor them each year. I have not attempted to chronicle reproductive success, or do any banding. My objective has been to get in and out of the colonies as fast as possible to minimize disturbance. I stay only long enough to find out what is there. Formerly I made an attempt to record nest contents, but in 1978 I gave this up, except for gulls and terns which can be done rapidly and thoroughly.

As a result, in almost all cases less than one hour was spent at any one site. This makes for a hectic but very productive pace: less than two weeks sufficed to cover all areas. I should like to get to the islands at other seasons, especially during the fall migration, and explore them in a leisurely manner.

Organization of this report. The sequence of site descriptions runs generally from north to south; for sites on the same latitude the sequence is from west to east. Maps and tables are placed with the descriptions of the sites they concern. Tables with data from several sites have the sites listed in the numerical sequence in which they appear in the text.

Abbreviations and symbols. The following abbreviations are used extensively:

a	adult	n	nest
Co.	County	s.	site
d	dead	w/	with
e	egg or eggs	x	species was seen but numbers were not recorded.
f	female	y	young
GBBG	Greater Black-backed Gull	'	foot or feet
GBH	Great Blue Heron	-	species was not seen
I.	Island	+	minimal count or estimate; more probably present.
m	male		
<u>MB</u>	Maryland Birdlife		

dates All dates without the year specified are 1978.

hammocks and other sites The bird lists for the sites visited are not limited strictly to the hammocks *per se* but also include beach, marsh, and mudflats in their immediate vicinity.

herons Throughout refers to all species that regularly breed in Maryland including the egrets and Glossy Ibis but excluding the bitterns. The ten regularly breeding species are: Great Blue Heron, Green Heron, Little Blue Heron, Cattle Egret, Great Egret, Snowy Egret, Louisiana Heron, Black-crowned Night Heron, Yellow-crowned Night Heron, and Glossy Ibis.

Acknowledgments. As with my 1973 and 1975 visits to Smith I., I am again indebted to William H. Julian, manager of Blackwater National Wildlife Refuge, for his kind permission allowing me access to Glenn L. Martin

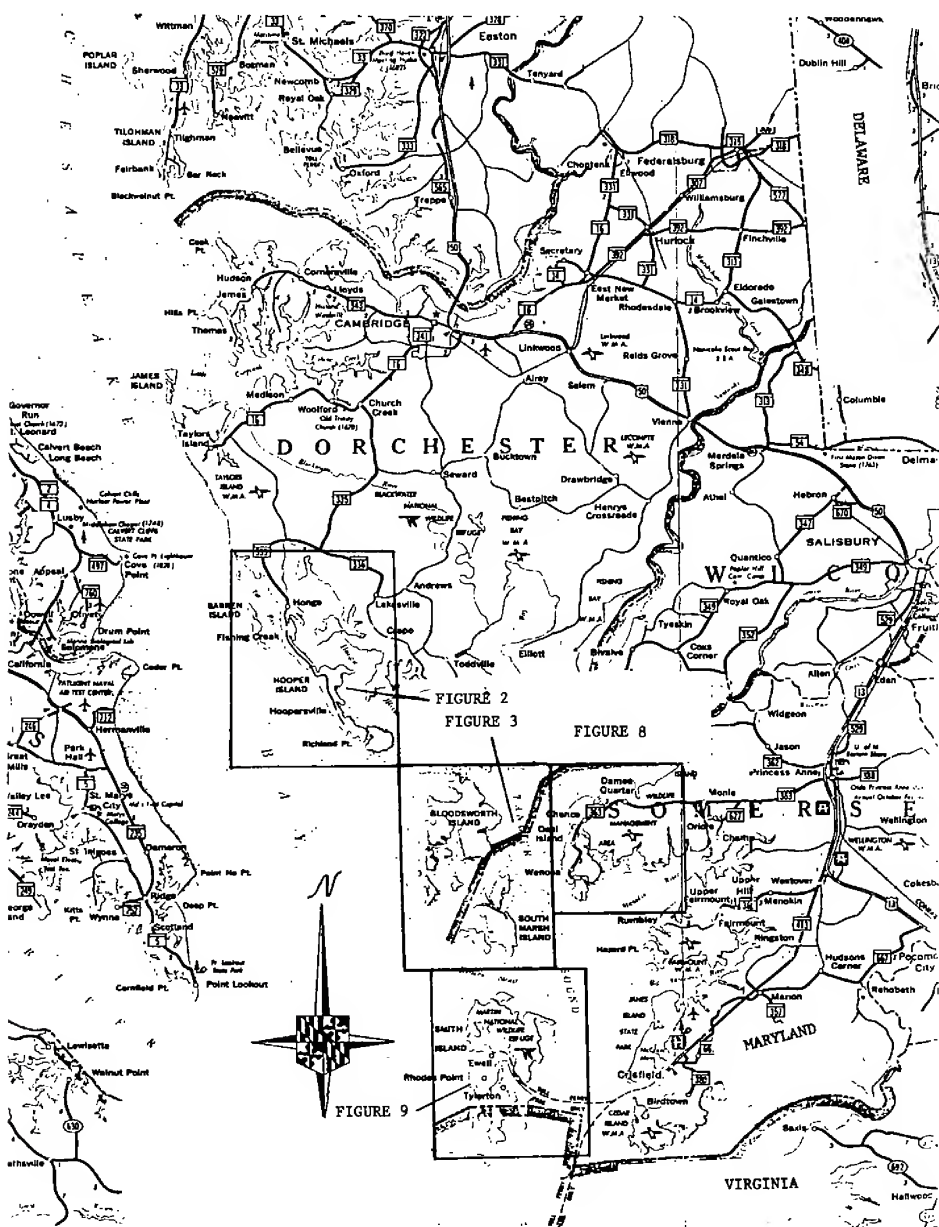


Figure 1. Lower Chesapeake Bay, showing the areas covered in more detail in Figs. 2, 3, 8, and 9.

National Wildlife Refuge, a restricted area. Without his interest, hospitality, and enthusiasm my exploration of the entire Smith I. area would have been far less fruitful. Penn Richard Chu and August M. Tolzman, III, who accompanied me to Smith I. this year, besides being ideal companions, were extremely helpful in all matters of logistics and made a signal contribution to the bird counts, especially at the gull colonies. Their photographic talents help to enliven this report. Thanks go also to Fred R. Scott for sharing with me the results of his 1978 foray in the Tangier I. area. Chandler S. Robbins made many helpful editorial suggestions. Mitchell A. Byrd detailed his observations from previous years as well as those of his cohorts. Dr. John S. Weske, George Reiger, and Paul W. Sykes, Jr., made useful comments. My wife, Liz, was very patient or tolerant while I was afield or afile, and helped me with the typing.

Caveat birder. Most of the areas described in this report are either private or government property with restricted access. The Glenn L. Martin National Wildlife Refuge is off limits to the public except along the shorelines by boat. It is under the administration of Blackwater National Wildlife Refuge, Rt. 1, Box 121, Cambridge, Maryland 21613.

As I have advised elsewhere (MB 30:9), areas with colonial birds should not be visited except by persons with a legitimate scientific purpose. There are just too many harmful effects accompanying human disturbance: disruption of feeding and incubation, additional stress on already pressured adult birds, and heightened predation owing to the absence of adult birds that have been scared away. Startled young herons may fall out of nests and trees; startled adult herons can dislodge eggs. Sun, heat, rain, or cold can ruin eggs and kill young.

Because of these factors we almost always spent well under an hour in a colony and paid special attention to the possible ill effects the weather might inflict. Readers of this report are urged not to visit bird colonies unless they have crucial, unique work they are doing and also have permission from the property owners. In addition to these factors the heat, insects, and poison ivy¹ tend to repel visitors.

Place name authority and maps. With few exceptions the place names used are those on the very helpful State of Maryland Geological Survey county maps. These are compiled from topographic quadrants of the U.S. Army Corps of Engineers and the U.S. Geological Survey showing topography, election districts, and even individual buildings. They are available from the Maryland Geological Survey, the Johns Hopkins University, Baltimore, Maryland 21218. Maps 2-5 are photocopied from these and are used with the kind permission of the Maryland Geological Survey. Map 1, which shows Maps 2-5 in context, is photocopied from the Maryland Official Highway Map, created by and available from the Maryland Dept. of Transportation, State Highway Administration, Baltimore, Maryland 21201. Considering its genre, it is an excellent map, showing all the refuges, parks, and state wildlife management areas.

¹ See Appendix for scientific names of plants.

A few localities visited were not named on these maps. For these I have adopted locally used names. Examples are: Ireland, Pines, Wop I., and Round Hammock. The dictionaries vary somewhat on whether hammock or hummock is correct. I use hammock because in my experience it is used by people of the Bay. This makes it correct as far as I am concerned. I also like its southern associations. In the Bay a hammock is a high area in the marsh with bushes and usually trees (MB 30:11-12).

MANAGEMENT PROPOSALS

Since I have no official connection whatsoever with any of the owners of the islands (private, public, or otherwise), and have no formal training in wildlife management, it may seem presumptuous to be making suggestions on how to manage them for wildlife. However, there are several points that seem obvious. I urge their consideration by anyone reading this report.

Management Proposal 1: Create more hammocks. Almost every hammock from Lower Hooper I. and Bloodsworth I. down to the Maryland-Virginia boundary is important as a nesting, or potential nesting, site for heron colonies. In any year most of these hammocks with the significant exception of the inhabited ones, have heronries. The uninhabited ones that do not have heronries one year usually have them at some other time. Existing uninhabited hammocks should be left alone as havens for herons.

Several of the Bay islands consist almost exclusively of unbroken salt marsh, especially Smith, South Marsh, and Bloodsworth Islands. Hammocks could be created in the midst of some of these to provide additional potential nest sites for heron colonies. Ideally this should be done in areas where it would not interfere with or fill in tidal waters. High or unbroken marsh areas with no guts, creeks, or ponds might be suitable for the creation of such hammocks.

Once created the growth of trees and bushes should be encouraged, especially of groundsel-tree, wax myrtle, red cedar, American hackberry, winged sumac, black cherry, and poison ivy (to discourage visitation). Many of these plants would appear naturally given sufficient time; the wind and birds passing seeds would help this to happen. But in the interest of establishing vegetated hammocks expeditiously, these areas could be partially planted, which would also help prevent their erosion.

An obvious source of earth would be fill from dredging or from the marsh itself. But such earth is salty for years and makes establishing of trees difficult. Stanley Marshall has told me that this was the case with the area around the observation tower of the Martin refuge. Perhaps no more than three additional hammocks of a few acres each on the large marsh islands would make life more fruitful for the herons. I am not recommending that hammocks be peppered all over the place. Additional hammocks might also make life less tenuous for the small remnant populations of the few landbird species that inhabit island hammocks, such as Eastern Kingbird, House Wren, Carolina Wren, Gray Catbird, and Common Yellowthroat.

Previously, when islands were larger and the rising sea level was less of an erosion factor, insular populations of these species must have been larger. Recently there has been academic interest in some of these species as a subject for study of vocalization differences between mainland and insular populations. One of my companions, Penn Richard Chu, is now working on a related graduate level thesis at the University of Maryland: "Geographic variation in song of island-mainland populations of the Carolina Wren, *Thryothorus ludovicianus*." As human disturbance and erosion further threaten these hammocks with each passing year, the small isolated populations of these species are increasingly endangered. In Florida a new subspecies of Carolina Wren was recently described from a small island area (Stevenson, 1973). It is not inconceivable that a similar phenomenon may occur on the Bay Islands, undocumented as of this date.

If a decision were made to create additional hammocks, needless to say the advice of marine biologists, hydrologists, botanists, and other qualified persons would be highly desirable in addition to consultation with concerned local people.

Management Proposal 2: Osprey nesting platforms. Ospreys nest just about anywhere on the Bay islands. In large open marsh areas they will nest on any low object such as old crab pots, abandoned boats and other vehicles, pilings, duck blinds, drifted stumps and logs, or even the ground. Safer nest sites could be provided by erecting platforms on poles in such treeless areas, as has been done so successfully on the Martin refuge (Rhodes, 1972). Such structures have also been erected on Great Fox I., Va. (by the Chesapeake Bay Foundation), on the northeast side of Bloodsworth I., and at the Blackwater refuge. As has been demonstrated by the successful Martin refuge nests, the poles need not be higher than 10 feet. There are many areas on the Bay islands, on the mainland marshes, or offshore in nearby waters where the erection of such platforms would be a beneficial strategy.

Management Proposal 3: Tern bars. More nesting sites for terns need to be made, especially for Little Terns, which were found breeding at only one site in 1978. Small bars of mud, sand, and/or oyster shells are attractive to Little Terns. They often use these sites almost as soon as they are made. With such adaptability, including recent nesting on roofs in Florida and Cambridge, Md. (in 1978, Jan G. Reese, *pers. comm.*), one wonders why they are considered threatened. But many of the fill areas, spoil banks, and beaches they choose as nest sites are subject to great human disturbance.

Except for the Barren I. area they are scarce almost everywhere else on the Bay. Small colonies attempt to persist near Annapolis, Baltimore, and Tangier I., Va. In past years they have nested at Nelson's I., Crocheron, Rumbley, Kent I., and elsewhere, including Sharp's and Royston Islands. The latter two sites no longer exist.

But in the entire Smith I. area on the average day of birding the Little Tern goes unrecorded, or if seen at all the tally is usually only

one or two birds. Little Terns are especially fond of sand, oyster, or shell bars, including sites with a mix of sand and shell. Common and Forster's Terns prefer to nest in marsh grass. Piles of oyster shells, instead of being dumped in back of some shelling house or along a road shoulder, could be placed in suitable shallow water locations provided authorities could locate such areas where currents and wind would not immediately wash them away and where they would not interfere with boat traffic.

As Black Skimmers continue to increase as visitors to the Smith I., Tangier I., and Crisfield areas, and also as occasional breeders in the Virginia part of the Bay, it is quite likely that they might begin to breed in the Maryland part also. Tern bars have been built and used successfully by terns at the National Audubon Society's Rainey refuge in Louisiana and also in England. A recent graduate thesis at North Carolina State University indicates that terns and skimmers may prefer dredged nesting sites to natural ones (Everhart, 1978).

Management Proposal 4: Land acquisition. The report of the Smithsonian Institution's Ecology Program, Center for Natural Areas, entitled Natural areas of the Chesapeake Bay region: ecological priorities (May 1974) was a disappointment to the writer only in the respect that it did not designate more Bay island areas as prime places for preservation. South Marsh I. and Tangier I. were about the only Bay island areas considered as priority localities.

It is hoped that the present report may influence organizations such as the Chesapeake Bay Foundation, the Nature Conservancy, the Maryland Ornithological Society (Sanctuary Committee), the state governments, and others so that greater attention is paid to the islands. The recent acquisition of South Marsh I. by the state and of Great Fox I. and part of southern Smith I. by the Chesapeake Bay Foundation is heartening.

Preservation of the islands is important not only for the birds, but also for the continuing interests of the seafood industry, hunters, fishermen, and others whose recreation or livelihood depend on the Chesapeake Bay. The Martin refuge and the areas mentioned above are already under responsible stewardship, but there are other very important areas that are also worthy of protection.

Except for Cherry I., none of the large, mixed heronries in the area covered by this report is on protected land. Holland I. is one of the most important heronries in the state. Between the Martin refuge and the Maryland-Virginia border are at least six heronries, none of which is on a protected area.

With the increase of tourism in the Smith-Tangier I. area, the growing recreational and commercial use of the Bay needs to be buffered with protected natural areas that can still be used by the Bay's watermen industry, so important to the residents of the Bay islands. Private owners need to be encouraged to manage their wetlands and other lands in ways that will benefit wildlife.

GENERAL PHENOMENA

1. Bluefish die-off. Almost everywhere we went on the Bay islands we found large numbers of dead bluefish (*Pomatomus saltatrix*). Most had been dead for perhaps a week or more. Their mouths were open and viscera were protruding from many. Most of them were washed up on the Bay side of the islands. We found many, many hundreds. We also found large numbers of dead blues in previous years, especially in June 1975. George Reiger suggests (*pers. comm.*) that the dead blues may result from several factors: varying water temperatures, salinity, and a widespread antagonism to blues by local fishermen because (1) they are not a favored eating fish locally, (2) they are hard to release because of their teeth, (3) they damage nets, and (4) they eat fish. Many of them are killed outright by fishermen.

2. Dead birds. A larger than usual number of dead birds was found in 1978. These are listed in Table 1 below. Most of these were assumed to be the result of the fowl cholera epidemic last spring, especially since so many of them were Oldsquaws, which were also very hard hit by a similar epidemic in the spring of 1970. Most of the gulls in Table 1 were birds that had died at their breeding colonies.

Table 1. Dead waterbirds found in May-June 1978

Site number:	1-6	9	12	13-19	27	29	36	41	42	43-45	Totals
Species											
Common Loon	-	-	-	1	-	1	-	-	-	-	2
Horned Grebe	-	-	1	-	-	-	-	-	-	-	1
Double-cr. Cormorant	-	-	1	-	-	-	-	-	-	-	1
Whistling Swan	-	-	-	2	-	-	-	-	-	-	2
duck (species?)	-	-	-	3	-	-	-	-	-	-	3
Canvasback	-	-	-	1m	-	-	-	-	-	-	1
Common Goldeneye	-	-	-	1m	-	-	-	-	-	-	1
Oldsquaw	5	1	8	3	1	-	1	-	-	-	19
Surf Scoter	-	-	2	1	-	-	-	-	-	-	3
Black Scoter	-	-	1	-	-	-	-	-	-	-	1
Greater Bl.-b. Gull	-	-	1	1	-	-	1	-	-	-	3
Herring Gull	2	-	1	2	-	-	1	19	9	1	35
Ring-billed Gull	1	-	-	-	-	-	-	-	-	-	1
Little Tern	1	-	-	-	-	-	-	-	-	-	1
Total individuals	9	1	15	15	1	1	3	19	9	1	74
Total species	4	1	17	9	1	1	3	1	1	1	14

site numbers: 1-6, Barren I.; 9, Bloodsworth I.; 12, Adam I.; 13-19, Holland I.; 27, Cherry I.; 29, Wop I.; 36, Swan I.; 41, Easter Point; 42, Point Comfort; 43-45, Rhodes Point.

3. Cormorant surge. Never have I seen so many Double-crested Cormorants at this time of year. They were abundant everywhere from Lower Hooper I. all the way south to the state line. Our four-day totals (May 28-31) from Smith I. of 264, 340, 335, and 70 I consider to be very

high counts, more like what one might expect at the peak of the spring migration. In 1978 this species was found breeding near Hopewell, Va. (Fred R. Scott, *pers. comm.*). A sharp watch should be made for breeders in Eastern Shore heronries. On June 24, 1977, Scott and I found 278 of them in the Tangier I. area, an even more surprising count considering the time of year. I have seen over 200 roosting at dusk on the light structure off the south tip of Tangier I.

3. Gadwall increase. These attractive ducks seem to be increasing as breeding season birds on the lower Bay. Deal I. Wildlife Management Area and vicinity has been their traditional stronghold as a Maryland breeding species, but they seem to be spreading out from there (MB 31: 131-134). During my first visit to Smith I. in 1973 I did not find any. In 1975 I saw broods on Swan I. as well as adults nearby (*e.g.*: South Marsh I., June 19). I saw a pair at Barren I. on June 4, 1977. In 1978 I found them on all parts of the Martin refuge, on South Marsh I., Lower Hooper I., and more abundant than previously at Blackwater refuge. In 1977 James Freeman and I suspected breeding at Holland I. In that year they were commoner than I ever remember them at Elliott I., which sported a total of 33 on August 27, including a female with 3 downy young, a very late date for the latter.

5. Laughing Gull. Laughing Gulls do not seem to breed anywhere on Chesapeake Bay. I have never seen evidence that suggests they breed on the islands. Formerly they were reported as breeding on Sharp's I., Talbot Co., Md., but in view of the fact that these records were either second-hand reports or of flying young birds their validity as true breeding records may be questioned. Still, it seems incredible that with hundreds of adult-plumaged gulls present on the Bay in May and June they do not seem to nest anywhere in Maryland or Virginia except near the Atlantic Coast.

POPULATIONS OF COLONIAL WATERBIRDS

Summary for 1978. The estimated numbers of breeding pairs of herons, gulls, and terns in the Maryland portion of lower Chesapeake Bay in 1978 are shown for each island in Table 2. Below the table each bird species is ranked by abundance and by number of sites; the sites also are ranked by number of breeding pairs.

Variation in heronry size: 1973, 1975, and 1978. The only other year when I made a survey of heronries approaching the completeness of 1978 was 1973. In 1973 I estimated 2502 pairs of herons of ten species at ten sites. In 1978 I estimated 2164 pairs of herons of ten species at sixteen sites. All ten 1973 sites were revisited in 1978 including Little Deal I., which had no herons in 1978. Thus there was a drop of 338 pairs (13.51%) from 1973 to 1978, in spite of the fact that seven additional sites were surveyed in 1978. I have no idea of the reason(s) for this considerable decline. Table 3 shows the dynamic, changing nature of the heronries. One heronry declined by 97 pairs, another by 933, and four others in the neighborhood of 200 pairs each, while two others increased by nearly 300 and 400 respectively.

Table 2. Estimated number of breeding pairs of colonial birds, lower Chesapeake Bay, Maryland, 1978

	Great Blue Heron	Green Heron	Little Blue Heron	Cat- tles Egret	Great Egret	Snowy Egret	Louisiana Heron	Black- crowned Night Heron	Yellow- crowned Night Heron	Glossy Ibis	heron total	Great Black- back Gull	Her- ring Gull	For- ster's Tern	Com- mon Tern	Little Tern
s.1 Barren I.	55	-	-	-	25	-	-	-	-	-	80	-	-	-	-	-
s.6 Oyster Bar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	100
s.9 Bloodsworth I.	114	15	-	-	2	-	-	10	-	-	141	-	-	-	-	-
s.12 Adam I.	4	5	-	-	-	-	-	5	8	-	22	-	-	-	-	-
s13-19 Holland I.	19	9	70	70	47	140	32	127	40	40	594	-	6	-	30	-
s.20 South Marsh I.	9	3	-	-	-	1	-	5	-	-	18	-	-	-	-	-
s.21 Deal I.	49	-	-	-	-	-	-	-	-	-	49	-	-	-	-	-
s23-25 Manokin River	-	-	-	-	-	-	-	-	-	-	-	1	1	385	172	-
s.27 Cherry I.*	25	3	25	45	30	30	20	120	10	40	348	-	-	-	-	-
s.29 Wop I.*	-	3	-	-	-	-	-	5	15	-	23	-	-	-	-	-
s.30 West Troy I.*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-
s31-35 Barnes Landing*	13	-	-	-	-	-	-	4	18	-	35	-	-	-	-	-
s.38 Frances Gut	-	3	40	35	7	75	30	175	35	60	460	-	-	-	-	-
s.39 Ewell-heronry	-	3	-	-	-	-	1	-	4	1	9	-	-	-	-	-
s.40 Ewell-town	-	-	-	-	-	-	-	2	12	-	14	-	-	-	-	-
s.41 Easter Point	-	-	-	-	-	-	-	-	-	-	-	12	846	-	-	-
s.42 Point Comfort	-	-	-	-	-	-	-	-	-	-	-	25	420	-	-	-
s43-45 Rhodes Point	-	-	-	-	-	-	-	-	-	-	-	8	238	-	-	-
s.46 Round Hammock	-	3	10	-	-	10	7	5	20	-	55	-	-	-	-	-
s.48 Pines	3	5	15	15	10	30	10	20	35	10	153	-	-	-	-	-
s.49 Ireland	5	2	15	-	15	20	3	8	25	-	93	-	-	-	-	-
s.51 Hog Neck	15	1	-	-	15	-	1	18	20	-	70	-	-	-	-	-
Totals	311	55	175	165	151	306	104	504	242	151	2164	46	1511	385	231	100

Heron species rank (abundance): Black-crowned Night Heron 504; Great Blue Heron 311; Snowy Egret 306; Yellow-crowned Night Heron 242; Little Blue Heron 175; Cattle Egret 165; Great Egret 151; Glossy Ibis 151; Louisiana Heron 104; Green Heron 55.

Heron species rank (no. of sites): Black-crowned Night Heron 13; Green Heron 12; Yellow-crowned Night Heron 12; Great Blue Heron 11; Great Egret 8; Louisiana Heron 8; Snowy Egret 7; Little Blue Heron 6; Glossy Ibis 5; Cattle Egret 4.

Heron site rank (breeding pairs): Holland I. 594; Frances Gut 460; Cherry I. 348; Pines 153; Bloodsworth I. 141; Ireland 93; Barren I. 80; Hog Neck 70; Round Hammock 55; Deal I. 49; Barnes Landing 35; Wop I. 23; Adam I. 22; South Marsh I. 18; Ewell-town 14; Ewell-heronry 9.

* Martin National Wildlife Refuge sites.

The recorded increase at Holland I. is primarily a result of much better coverage of all parts of the island in 1978. The dramatic decrease at Barren I., as detailed elsewhere in this report, is easily attributable to shoreline erosion of the three previous heronry sites there. Note also the decline at Round Hammock of some 200 pairs from 1975 to 1978. Round Hammock as well as the other sites mentioned above (exclusive of Holland I. and Barren I.) present mysteries as to the reasons for these declines. Complete details of the 1973 colonies were published in 1974 (MB 30:9-27). These dynamic changes would seem to mandate annual monitoring of all these sites. Unfortunately with adversities (!) such as a residence in Pennsylvania, an unrelated career, and a young, growing family, the writer is not one who can accomplish this.

Table 3. Variation in heronry size: 1973, 1975, and 1978

	Number of breeding pairs			Change 1973-1978
	1973	1975	1978	
s.1 Barren I.*	1013	nv**	80	-933
s.7 Pons Point	0	200	0	0
s.9 Bloodsworth I.*	238	148	141	-97
s.12 Adam I.	19	nv	22	+3
s.13-19 Holland I.***	200	nv	594	+394
s.20 South Marsh I.	nv	5	18	?
s.21 Deal I. W.M.A.*	70	95	49	-21
s.22 Little Deal I.*	200	nv	0	-200
s.27 Cherry I.***	70	330	348	+278
s.29 Wop I.	219	16	23	-196
s.31-35 Barnes Landing	nv	nv	35	?
s.38 Frances Gut	nv	nv	460	?
s.39 Ewell-heronry	188	57	9	-179
s.40 Ewell-town	nv	nv	14	?
s.46 Round Hammock	nv	245	55	?
s.48 Pines	nv	nv	153	?
s.49 Ireland	285	nv	93	-192
s.51 Hog Neck	nv	nv	70	?

* Decline at least partly a result of loss of suitable nest sites because of shoreline erosion (Barren I. and Little Deal I.) or deterioration of dead trees used for nesting (Bloodsworth I. and Deal I. W.M.A.).

** nv = not visited.

*** Increases at least partly a result of better coverage.

LATE MIGRANTS

Late shorebird migrants. Late migrating shorebirds are a regular feature of the islands in late May and June. Table 4 shows the commoner species and their relative abundance. The Greater Yellowlegs and Least Sandpiper are clearly not to be expected to the same extent as Semipalmated Sandpipers. The shorebird migration extends well into June. In fact, in an extreme situation there may actually be overlap between the

dates of the last departing Semipalmated Sandpipers and the first fall Least Sandpipers in late June. The White-rumped Sandpiper is another notoriously late shorebird, not infrequently encountered elsewhere during the second week in June, but I have not seen it yet on the islands. Among the first species found heading south in the fall, usually in early July, are Whimbrel (rare on the Bay), Lesser Yellowlegs, Willet, Stilt Sandpiper, Short-billed Dowitcher, and Least Sandpiper. One of the nice aspects of scheduling a trip to the islands in early June is that one is certain to see some of these late shorebirds in full breeding plumage.

Table 4. Late shorebird migrants (1978 unless otherwise indicated)

	Semi. Plov.	Bl.B. Plov.	Ruddy Turn.	C.Ye. Legs	Red Knot	Least Sand.	Dun- lin	S.Bil Dowit	Semi. Sand.	Sand- erling	Date
s.1-6 Barren I.	1	2	4	-	2	-	-	-	36	-	6/4
"	1	19	18	-	-	-	2	5	70	4	6/4/77
s.9 Bloodsworth	-	3	12	-	2	9	30	1	20	-	5/27
s.12 Adam I.	1	-	5	-	1	-	6	3	9	-	5/27
"	-	2	3	-	-	2	4	1	10	1	5/28/72
s.13-19 Holland I.	2	1	7	-	-	-	40	21	191	-	5/27
"	1	-	-	-	3	-	-	-	27	-	6/2
s.20 South Marsh	-	-	2	-	-	-	-	-	50	-	6/2
s.27 Cherry I.	4	5	5	-	4	-	3	16	1	-	5/30
s.28 Terrapin S.	-	1	-	-	2	-	-	7	45	-	5/30
s.29 Wop I.	-	27	-	-	-	-	4	3	45	-	5/29
s.31-35 Barnes Land.	-	1	-	-	-	1	-	-	4	-	5/31
s.36 Swan I.	4	6	-	-	-	-	20	1	40	-	5/28
"	2	1	-	-	-	-	-	3	62	-	5/29
"	1	1	-	-	-	-	1	-	53	-	5/31
"	1	1	-	-	-	-	1	-	53	-	6/1
s.38 Frances Gut	-	-	-	1	-	-	-	-	45	-	5/30
1978 Totals*	17	49	35	1	14	10	105	55	681	0	
No. of 1978 sites	9	11	6	1	6	2	8	8	15	0	

* Undoubtedly some of the same birds were seen on more than one date or at more than one site. Same site, different date count as two sites.

Late landbird migrants. Most of these (Table 5) were encountered within a radius of one mile of Ewell, Smith I. (s.40); the majority were in the town. In addition several late Swainson's Thrushes were heard flying over Ewell on the evening of May 29.

BREEDING LANDBIRDS

Number of pairs of breeding landbirds observed in 1978. Of almost as much interest as the islands' waterbirds are the breeding landbirds. At least part of this interest stems from their scarcity both in numbers and species. This scarcity is a result of the small amount of suitable habitat available. Most of the islands are predominantly salt marsh and often the few high hammocks present have only small areas of high ground, which tend to be either circular or semi-circular or quite long but rather narrow. Fin Creek Ridge, Frances Gut, Adam I., Wop I., Cherry I., and Barnes Landing (site 35) are good examples of the long, narrow hammocks.

Table 5. Late landbird migrants, 1978

	5/27 Holland I.	5/27 Croch- eron	5/28 Smith I.	5/29 Smith I.	5/30 Smith I.	5/31 Smith I.	6/1 Smith I.
Yellow-billed Cuckoo	-	-	1	-	-	-	-
Common Flicker	-	-	2	-	-	1	2
Great Crested Flycatcher	-	-	-	-	1	-	-
Bank Swallow	-	-	-	-	-	-	2
Cliff Swallow	-	1	-	-	-	-	-
Blue Jay	-	-	6	x	x	-	x
Brown Thrasher	-	-	1	-	1	-	-
White-eyed Vireo	-	-	1	-	-	-	-
Red-eyed Vireo	-	-	-	-	-	-	1
Yellow Warbler	-	-	2	-	2	-	-
Blackpoll Warbler	-	-	-	-	-	1f	-
American Redstart	1	-	-	2	x	2	2
Bobolink	-	-	5	x	-	2	-
Orchard Oriole	-	-	1	-	-	-	-
Blue Grosbeak	-	-	1	-	-	-	-
Indigo Bunting	-	-	1	1	-	-	-
American Goldfinch	-	-	1	-	-	1	-
Red Crossbill	-	-	7	2	-	-	-
Savannah Sparrow	-	-	-	-	1	-	1
Swamp Sparrow	-	-	-	1	-	-	-

Ireland, Hog Neck, Pines, Round Hammock, Barnes Landing (sites 31-33), and the Bloodworth I. hammocks exclusive of Fin Creek Ridge are good examples of roundish hammocks. The Barren I. and Holland I. hammocks do not fit this pat generalization on hammock shapes, but then, these are not predominantly marsh islands. However, Holland I. (sites 18-19) does have two hammocks that are elongate. Many of the hammocks on Hooper I. are very elongate and straight.

The estimated number of pairs of landbirds for which there is strong evidence of positive breeding in 1978 is shown in Table 6. In previous years other species have been found as breeders, such as Carolina Wren and Northern Cardinal on Adam I., Sharp-tailed Sparrow on Bloodworth I., and numerous others. Seaside Sparrow is omitted because they breed virtually wherever there is extensive salt marsh. In 1978 none were found on Barren I., which does not have extensive salt marsh. But previously they have bred even there. Smith I. has the biggest potential for breeding landbirds since it has the best and the most habitat for them. There are many species I have seen there which may, in fact, be breeders, such as American Robin, Orchard Oriole, Indigo Bunting, Common Flicker, and several others. Because of its large hammocky areas and extensive settlement, Smith I. is obviously not a representative hammock area either, at least in the areas around the three towns. Of course, the swallows and swifts generally require buildings.

Table 6. Number of pairs of breeding landbirds observed in 1978

Site numbers	1	9	12	13-	19	20	22	27	31-	29	35	38	39	40	41	43-	42	45	46	47	48	49	50	51
Species																								
1*Chimney Swift	-	-	-	-	-	-	-	-	-	-	-	-	-	5+	-	-	-	-	-	-	-	-	-	-
12 Eastern Kingbird	1	2	1	3	-	1	2	2	-	-	-	-	-	2+	-	-	-	-	-	1	2	-	1	1
1 Tree Swallow	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 Barn Swallow	x	1	5	8	10	-	-	-	-	-	-	-	-	5+20+	-	-	-	-	-	-	-	-	15+	-
2 Purple Martin	-	-	-	-	-	-	-	-	-	-	-	-	-	40+	-	-	-	-	-	-	-	-	25+	-
17 Fish Crow	2	6	3	15	1	-	4	4	4	22	11	20	-	-	1	1	1	2	10	4	-	2	-	2
9 House Wren	2	3	3	7	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	3	1	1	-	-
8 Carolina Wren	3	2	-	3	-	-	1	-	1	1	-	1	-	1	-	-	-	-	-	1	-	-	-	-
14 Marsh Wren	-	30+	3	-	3+	-	3	1	7	3	-	2	1	3	-	5	2	-	3	2	-	2	-	2
13 Gray Catbird	-	2+	2	5	1	2	-	2	2	1	1	3	-	1	-	1	-	-	-	-	-	1	1	1
5 E. Starling	2	5	-	-	-	-	-	-	-	-	-	-	-	10+	-	-	-	-	-	1	-	5+	-	-
19 C. Yellowthroat	1	5+	2	2	2	2	3	2	6	3	1	3	1	1	-	1	2	1	2	-	2	2	-	2
2 House Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	9	-	-
1 Eastern Meadowlark	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 R.-w. Blackbird	1	3+	3	9	3	2	2	-	3	-	-	7	2	3	2	-	-	-	-	-	-	2	-	-
18 B.-t. Grackle	6	20+	8	9	6	3	2	3	4	6	8	x	2	-	2	3	-	5	3	-	2	-	-	-
1 Common Grackle	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
1 B.-h. Cowbird	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
7 N. Cardinal	3	-	-	1	-	1	1	1	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-
6 Sharp-t. Sparrow	-	-	1	-	2	-	3	-	5	4	-	-	-	-	-	1	-	-	-	-	-	1	-	-
20 Song Sparrow	5+	6+	3	10	5	5	4	2	7	4	3	4	1	-	2	2	2	1	1	2	1	2	1	1
Total species	11+14	11	11	9	7	11	8	9	8	6	18	5	2	7	5	4	10	5	10	7	-	-	-	-

Species rank (in descending order from occurrence at highest number of sites to lowest). Song Sparrow 20; Common Yellowthroat 19; Boat-tailed Grackle 18; Fish Crow 17; Marsh Wren 14; Gray Catbird 13; Red-winged Blackbird 13; Eastern Kingbird 12; House Wren 9; Barn Swallow 8; Carolina Wren 8; Northern Cardinal 7; Sharp-tailed Sparrow 6; European Starling 5; Purple Martin 2; House Sparrow 2; Chimney Swift 1; Tree Swallow 1; Eastern Meadowlark 1; Common Grackle 1; Brown-headed Cowbird 1.

Site rank (in descending order from site with most breeding species to lowest; numbers in parentheses are site numbers). Ewell-town (40) 18; Bloodsworth I. (9) 14; Barren I. (1) 11; Adam I. (12) 11; Holland I. (13-19) 11; Cherry I. (27) 11; Pines (48) 10; Tylerton (50) 10; South Marsh I. (20) 9; Barnes Landing (31-35) 9; Wop I. (29) 8; Frances Gut (38) 8; Rhodes Point (43-45) 7; Hog Neck (51) 7; Little Deal I. (22) 7; Ewell-heronry (39) 6; Easter Point (41) 5; Ireland (49) 5; Round Hammock (46) 5; Long Branch (47) 4; Point Comfort (42) 2.

See above for further explanation, especially with regard to additional breeding landbirds found on Barren I. and Little Deal I.

* numbers in this column indicate the number of sites in this table at which a species was found.

Because of space limitations I have used site numbers instead of site names in Table 6. This table is based mostly on counts of singing males, except for certain less lyrical species such as Fish Crow, the blackbirds, European Starling, and their ilk. Atypical islands need further explanation. Barren I. with its huge forest of large trees differs from all others; its breeding Great Crested Flycatchers, Red-eyed Vireos,

Pine Warblers, and Rufous-sided Towhees were not included in Table 6 because they obviously are not representative hammock birds (the towhee on Bloodsworth I. on July 2, 1967, must be regarded as a fluke). Little Deal I., being so close to the mainland, has some species I have never found breeding on other islands: possible Eastern Pewee, possible Common Crow, White-eyed Vireo, and Yellow Warbler. I do not believe that any of these species breed on the central Bay islands. However, on June 24, 1977, Fred R. Scott and I heard a singing White-eyed Vireo that gave every impression of being on breeding territory on Watts I., Va. I have seen Common Crows several times on Holland I. as well as at Ireland in 1973.

THE HOOPER ISLAND REGION

Sites 1-6, Figure 2. Barren Island area, Dorchester Co., June 4. The central part of Barren I. (Site 1) was approached by boat and a landing was made in the early afternoon on the east side. I walked through the entire heronry, which, as in the past several years, is in the very large loblolly pines that form a nearly uniform forest over sixty feet high. In many places this forest is open and park like. However, some of the forest has chest-high tangles of poison ivy, green-brier, and honeysuckle. In the center of the pine forest is a low area with some standing fresh water where switch-grass is common. On the west side of the central forest is a delightful, open, marshy, protected area where rose mallows grow. The north end of Barren I. (see below) has some muddy flats and seems to be building up, with saltmarsh cord-grass beginning to grow.

The three hammocks where the thousand-plus pair heronry of 9 species was in 1973 have been almost completely destroyed by shoreline erosion; only a few trees remain, mostly dead loblolly pines. On one of the stumps of these was an active Osprey nest piled high with sticks. This is the only place (Tar Bay) I have seen on the lower Bay where cat-tails grow right out onto the sod bank to within a few feet of open tide-water. Other common dominant plants here are sweet gum, persimmon, wax myrtle, American holly, black cherry, and in several places, white poplars. In 1978 the U.S. Army Corps of Engineers dumped a lot of dredge spoil in the area southeast of the hunt club on the island's north end. This can be seen even from the mainland with proper optics. At high tide it is delightful to take a small boat up Barren I. Thorofare, which goes through the center of Barren I. so close to the pine groves.

Lower Barren I. south of the forested areas and the marshy stretch just south of these consists of two elongate islands. The northern one I call Grass Bar (GB, Site 2) since it is primarily a marsh island. But the thorny tree in which I found a Fish Crow nest with one young bird on June 19, 1973, still persists, even though it was on the verge of being eroded away on June 4, 1978, when it contained 4 Boat-tailed Grackle nests. On June 4, 1977, I had found one American Oystercatcher egg that had been swept away from the nest scrape by the water; even though adults were present then, I did not feel that it represented an active nest. On June 4, 1978, just a few minutes after landing, I found an oystercatcher

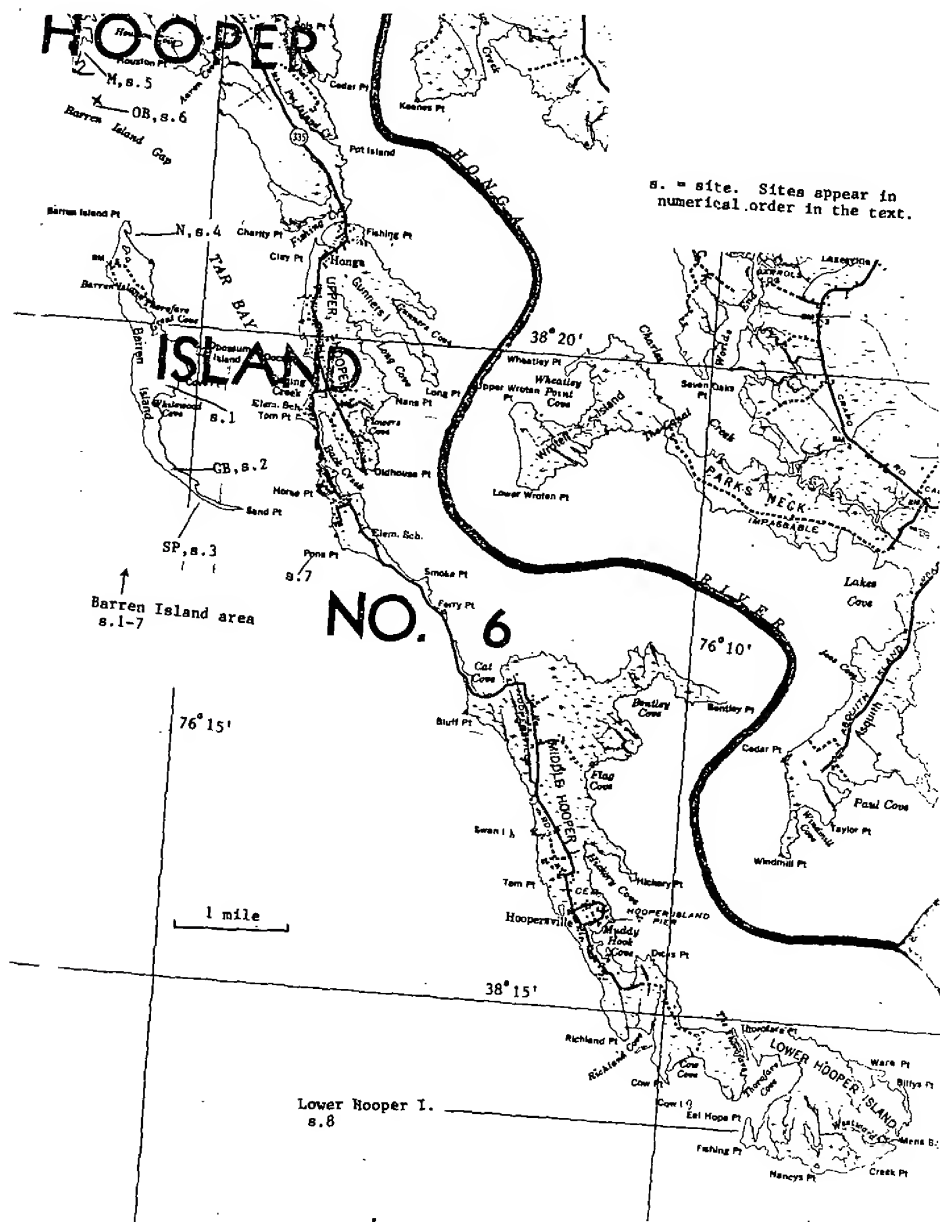


Figure 2. Map of the Hooper Island Region showing sites 1-8

nest here with 3 eggs. A pair of adults was present. Except for a Green Heron nest with 4 eggs in the thorn tree area and the grackle nests, Grass Bar was otherwise rather barren.

Formerly Grass Bar and Sand Point (see below) were both connected to the main part of Barren I., comprising one long strip contiguous with the area that held the three heronries of 1013 nests of nine species in 1973. I discovered this heronry, which was visible from Hooper I., in 1972. In 1974 these heronries had dropped to about 850 pairs of the same nine species. In 1975 the colony had further slipped to become a small, mixed heronry (Mitchell A. Byrd, *pers. comm.*). It was in 1975 that a new colony developed at Pons Point, Hooper I. (see below), probably derived from the Barren I. colonies, which disappeared from erosion.

Sand Point (SP, Site 3) consists of a pure sand bar island with hardly any vegetation. In 1974 no Little Tern nests were found anywhere in Maryland, probably because few observers bothered looking for them. On June 10, 1975, a large Little Tern colony was discovered on Sand Point; 112 nests were located (13 w/ 1e, 47 w/ 2e, 52 w/ 3e, *fide* Mitchell A. Byrd). This colony was conspicuous enough so that on June 16, 1975, I was able to count 53 Little Terns all the way from the store at the town of Fishing Creek. On July 4, 1976, I visited the colony and estimated 100 pairs. I did not attempt to find all of the nests, but the 46 I did find broke down this way: (3 w/ 1e, 41 w/ 2e, 1 w/ 1y, 1 w/ 2y); there were 165 or so flying adults, 15 small flying young, and 6 young out of the nest scrapes. Prior to 1975 I had seen small numbers of Little Terns here and suspected breeding in very small numbers. I do not think terns bred here in 1977 or 1978. Sand Point is a favored roosting spot for gulls and terns, especially for Royal and Forster's Terns in the autumn. Due south of it is a small sandy island which has developed only within the last few years; this is also a good roosting spot. Cormorants like to put down here. The highlight of my June 4, 1978, visit at Sand Point was the finding of an oystercatcher nest with 2 eggs and 2 adults nearby. Usually small numbers of shorebirds are present. Ospreys nest in the area.

The North end of Barren I. (N, Site 4) and east of Barren I. Point is an attractive marshy area with flats at low tide where the marsh is building up and developing. *Spartina alterniflora* is beginning to grow. Gulls and terns also roost here. On June 4, 1977, I saw a pair of Gadwall and Blue-winged Teal.

The Marshes (M, Site 5) lie at the north end of Barren I. Gap, west of Houston Point. There are some nice little lagoons, sandy areas, and flats. On July 3, 1966, Liz Armistead and I found small numbers of Common Terns nesting with a few young large enough to band. On June 4, 1977, I found one Little Tern nest with two eggs. In season small groups of shorebirds inhabit the Marshes.

Oyster Bar (OB, Site 6). None of the maps I have seen really does justice to the realities of Tar Bay, and especially the group of small

sand/oyster bars just south of the Marshes. On the northernmost of these Gordon and Holly Chaplin, Liz Armistead, and I noticed numbers of roosting gulls, terns, and shorebirds on May 18, 1973. On June 4, 1977, I found 58 Little Tern, 1 American Oystercatcher, 1 Common Tern, and 4 Herring Gull nests. The gull and oystercatcher records represent the first breeding in Dorchester Co. (MB 33:111-112). On June 4, 1978, I revisited this site; the Little Tern colony had nearly doubled: 13 n w/ 1e, 35 n w/ 2e, 30 n w/ 3e, and 22 fresh scrapes. There was also a pair of adult oystercatchers with a downy young bird and four Common Tern nests. These 1977 and 1978 Little Terns may represent the ones that used to nest on Barren I. at Sand Point. The other sand/shell islands in this area are attractive enough but I have seen only roosting birds on them. Bald Eagles rest on these islands. If the development on adjacent Hooper I. ("Swan Cove") materializes it will probably seal the fate of these bars for breeding waterbirds.

Site 7, Figure 2. Pons Point (Hooper I.) Dorchester Co. A mixed heronry was discovered here in 1975 (Mitchell A. Byrd, *pers. comm.*). Both Byrd and I suspected it was composed of birds that formerly bred on Barren I. On June 16, 1975, I estimated about 200 pairs of herons were nesting there: Snowy Egret 75, Cattle Egret 75, Little Blue Heron 35, Glossy Ibis 9, Green Heron 5, Great Egret 1. On July 17, 1975, Dr. Byrd found that this "colony was virtually abandoned with numerous broken eggs in nests. We attribute this to Fish Crow predation, which was also very intensive on Barren I. Perhaps this caused the abandonment of the colony there earlier in the season." (Mitchell A. Byrd, *pers. comm.*). The Pons Point heronry, as far as I could tell, was not in use either before or after 1975. For the record, an American Oystercatcher at Pons Point on June 16, 1975, was the first I had ever seen in the Hooper I. area, and one at Barren I. on July 4, 1976, was the first I had ever seen on Barren I.

Site 8, Figure 2. Lower Hooper Island, Dorchester Co., June 5. I visited this area for the first time and went around it by boat. It was a very rough day so a landing was not made, although this could have been done on the protected Honga River side. Even so, the several large loblolly pine hammocks would have been so distant that attempting to either hear or see land birds or detect heron nests would have been fruitless. This is a really isolated area where I think the old town of Applegarth used to be. The pines here are large and there were enough Great Blue Herons to indicate a small colony in them, although the few big stick nests I saw seemed to be unoccupied. In 1976 Mitchell A. Byrd (*pers. comm.*) found a small colony here. Off the south tip of the island is a fishing weir where most of the terns were. The hammocks here look big enough to support the usual hammock breeding birds. Bird list: Double-crested Cormorant 40, Great Blue Heron 12, Great Egret x, Snowy Egret x, American Black Duck 7, Gadwall 2, Osprey x (4 active nests), Willet 4, Herring Gull x, Forster's and Common Tern 65, Royal Tern 11, and Boat-tailed Grackle x.

THE BLOODSWORTH ISLAND REGION

Site 9, Figure 3. Bloodsworth Island, Dorchester Co., May 27 and June 2. The first birder to visit Bloodsworth I. was John S. Weske, who

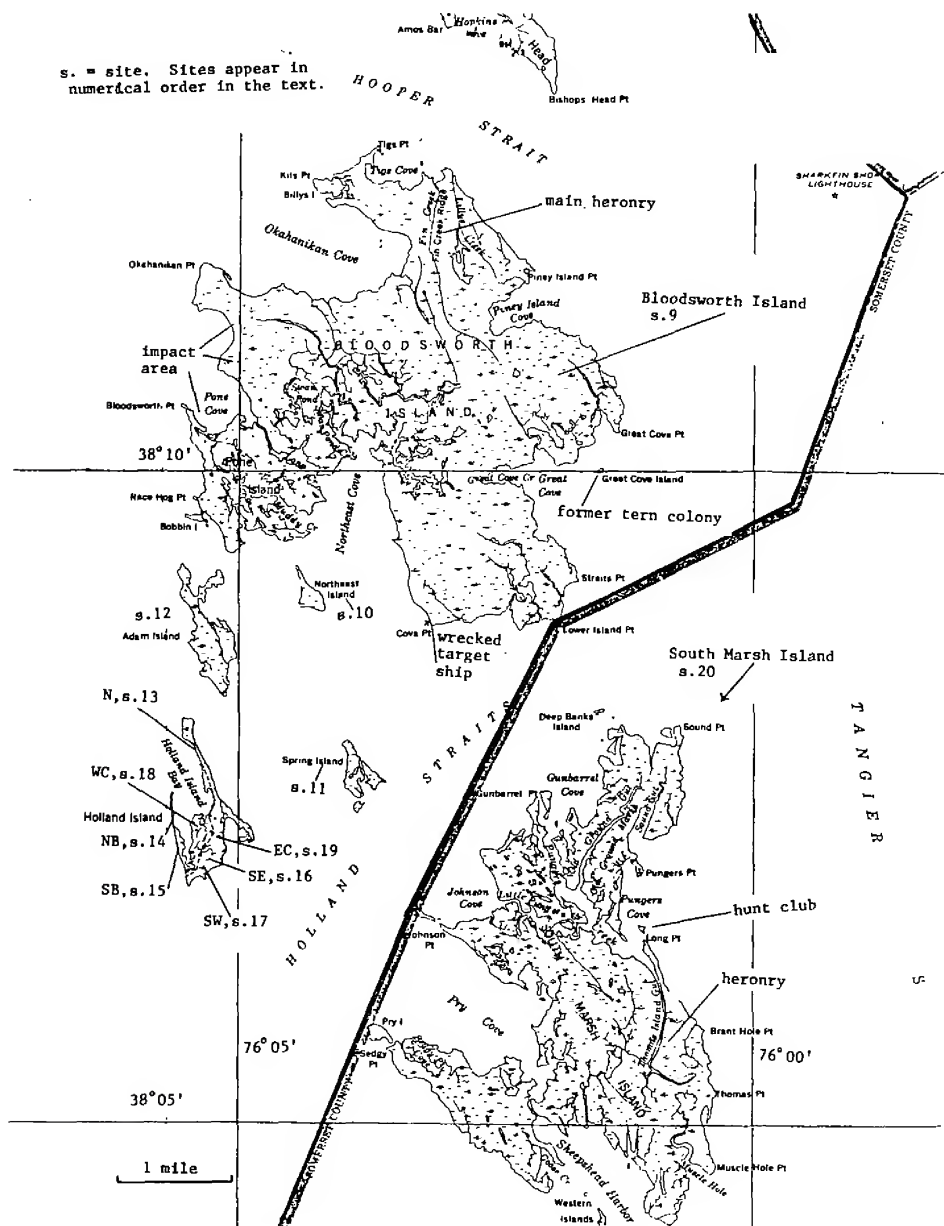


Figure 3. Map of the Bloodsworth Island Region showing sites 9-20

saw 4 Little Blue Herons and 8 Yellow-crowned Night Herons there on June 28, 1963. I would like to learn more about its history, especially when the large loblolly pines on Fin Creek Ridge (Fig. 4) died, whether this resulted from naval bombardment, arson, or natural causes, and if the island was previously inhabited. At one time Fin Creek Ridge had a beautiful stand of mature loblollies, perhaps 60 feet high. My first trip there was on July 2, 1967, with Van Hubbard (1939-1978), an old friend who was a geologist, trapper, canoeist, fisherman, and hunter, and who died too young in a tragic accident. We found many large trees still alive, many tangled with vines, and the dead pines were very tall, indicating they had died only a few years before. A dozen dim black and white photographs I took on that date with a crude camera offer a tantalizing look at a lush, overgrown hammock, which is hard to visualize now that Fin Creek Ridge has been reduced to *Baccharis* bushes and a few remnant pine snags. Each year these old pine boles diminish because of rot, blow-over, and degradation. They have become less suitable as nest sites for Great Blue Herons.



Figure 4. Looking south on Fin Creek, Bloodsworth I., May 19, 1973.

Faintly visible on left are a deer trail and nineteen Great Blue Heron nests. Photo by H. T. Armistead.

As may be seen from Table 7 there was a perceptible drop in the number of Great Blue nests after 1973 and for Great Egrets after 1974, which I think can be directly correlated with the deterioration of

suitable tree nest sites. My 1967 estimates are probably quite low, because they include only the Fin Creek Ridge area and do not take into account the rest of the island, including three small red cedar hammocks, two in the vicinity of Piney Island Cove, and one near Lower Island Point.

Table 7. Number of breeding pairs of colonial birds and Ospreys, Bloodsworth Island, 1967-1978

	1967	1971	1972	1973	1974	1975	1976	1977	1978
Great Blue Heron	119	x	180	180	120	119	102	101	114
Green Heron	x	x	x	20	20	15	4	x	15
Little Blue Heron	-	x	-	-	-	-	-	-	-
Great Egret	26	x	x	30	25	4	8	-	2
Snowy Egret	-	x	-	-	-	-	-	-	-
Louisiana Heron	-	x	-	-	-	-	-	-	-
Black-crowned Night Heron	5	x	-	5	5	10	5	5	10
Yellow-crowned Night Heron	5	x	-	3	3	-	1	5	-
Total pairs of herons	155+	x	180+	238	173	148	120	111+	141
Osprey	11	x	21	10	20	25	23	28	31
Forster's Tern	-	-	-	-	5	-	-	-	-
Common Tern	-	-	-	-	16	12	-	-	-

Even in 1978 Bloodsworth is still an important Great Blue colony. The three cedar hammocks mentioned above held 36 Great Blue Heron and 2 Great Egret nests: 12, 13, and 11 GBH nests going from south to north in the three hammocks with the two egret nests in the center one. The main colony is still along Fin Creek Ridge. But, as shown by the cedar hammocks, the GBH's seem to be forsaking somewhat the traditional Fin Creek Ridge stronghold. The higher numbers of them at the South Marsh I. hammock and possibly those on Lower Hooper I. may represent pairs that have abandoned Bloodsworth. There are other small hammocks, mostly with red cedars, south of Fin Creek Ridge and west of it, all of which are easily accessible by Fin Creek, even at low tide.

Over on the Bay shore of Pone Island, which is really part of Bloodsworth I., at Bloodsworth Point and Race Hog Point, there are two additional hammocks consisting entirely of pretty big deciduous trees. This is in the ominous Prohibited Area (Fig. 5) where naval shells impact. Although I have stopped nearby a few times I have never seen any sign of herons nesting at these two places and have never heard any of the landbirds that might be likely at such a spot, such as House or Carolina Wrens, Eastern Kingbirds, or Gray Catbirds. This may not seem surprising except for the fact that I have seen Ospreys nesting on the target ship in Northeast Cove (Cove Point) as well as on top of cars, helicopters, and an old tractor trailer right in the middle of the impact area. In 1977 I also found oystercatchers breeding in the impact area.

In addition to the dead loblolly pines mentioned above, the vegetation of Fin Creek Ridge and the cedar hammocks consists of poison ivy, *Baccharis*, and marsh elder. It is not as diversified as on some other islands. Fin Creek Ridge also has a black locust that had 9 active

GBH nests on July 3, 1976, and was riddled with Yellow-bellied Sapsucker drillings. Deer are common, especially around Fin Creek and east of there. James Freeman and I photographed a small fawn on the east side of Fin Creek on July 3, 1976. Natives on the mainland say there are otters. Off Okahanikan Point in the Bay there are still remains of several Sherman tanks. The sand bar that extends into Pone Cove from Bloodsworth Point has small numbers of roosting gulls, terns, and shorebirds.



Figure 5. The author, helicopter debris, and an otherwise pristine-looking expanse of Bloodsworth I. at Pone Cove, May 27, 1978. Photo by P. R. Chu.

Bloodsworth I. was the first island I visited in the lower Bay. Because of this and its natural complexity I have a special fondness for it. It belongs to the navy. Although it has been shelled by both ships and aircraft for over thirty years, it still remains wild and, amazingly enough, relatively unspoiled and undamaged. I suspect Tree Swallows and Eastern Meadowlarks breed here and probably nowhere else on the lower Bay islands. On August 7, 1971, in a hammock west of Fin Creek several species of herons flushed directly out of the underbrush, indicating breeding: Little Blue Heron, Snowy Egret, and Louisiana Heron. This is the only year these three species were present as breeders. Another short-lived phenomenon was the small tern colony at Great Cove I., which was active only in 1974 and 1975. Although visited several years before and after that, no terns were there (MB 30:128-132). In a few years this island will wash away. In 1976 eight or nine low Osprey platforms were erected in the Fin Creek Ridge area; these seem to be getting some use

now. I have seen old woodpecker holes in old trees on this ridge, some big enough to be flicker holes. On June 19, 1977, I found a Barn Swallow nest with 3 young in a duck blind on the shore of Great Cove, the only swallow nest I have ever seen in a blind.

The marsh vegetation of Bloodsworth is rather uniformly black needle-rush, as it is on most of the lower Bay islands as well as on the adjacent mainland salt marsh. However, there is also considerable *Spartina alterniflora* and in the higher marsh, saltmeadow hay.

One of the more interesting visits was on May 19, 1973, when Gordon W. Chaplin and I encountered several migrating landbirds: 9 Bank Swallows, 1 Yellow Warbler, 8 Bobolinks, 1 Northern Oriole, and 1 Rose-breasted Grosbeak. On this same day we also found the first county nesting record for Yellow-crowned Night Heron when we flushed an adult off a nest with 5 eggs in a huge 10 foot high *Baccharis*.

Unfortunately a thorough exploration of the island is not feasible because of the presence of unexploded ordnance. I have never explored the shoreline of Northeast Cove and the east side of Pone Island, including all the creeks and guts in this area. Natives on the mainland say that the navy suspends shelling during the hunting season. There are quite a few blinds on the north and east sides of the island. Hooper Strait between Fin Creek and Bishop's Head is a good place for diving ducks, especially in the early spring when many scoters are there. When the dead trees were taller they could be seen all the way from Elliott Island on a very clear day. Also on a clear day one could get a pretty accurate count of Great Blue Heron nests from the dock at Bishop's Head Hunting Lodge. However, the totals in Table 7 were all from actual visits to Bloodsworth.

Near Piney Point there is usually a fishing weir with good numbers of opportunistic Great Blue Herons, Double-crested Cormorants, Herring and Greater Black-backed Gulls as well as several species of terns. I have found bomb craters and recent marsh burns in parts of the island far from the impact area. I have never seen an Osprey nest on any of the huge, offshore observation towers north and west of Bloodsworth; perhaps they are too high and too far from shore. I have written about Bloodsworth I. previously in MB 28:100-101, 30:22-23, and 30:131. As with Adam I. (*q.v.*) the bird lists in Appendix Table 1 represent uneven coverage ranging from only an hour or so (1971) to 4 or 5 hours (May 19, 1973 and May 27, 1978). In Table 7 the 1967 and 1973 Osprey totals represent nests only in the vicinity of the Great Blue heronry on Fin Creek Ridge. The other totals were active nests seen both in the Fin Creek Ridge area and elsewhere around the island as I circumnavigated it.

Site 10, Figure 3. Northeast Island. Site 11, Figure 3. Spring Island. Dorchester Co. These are unremarkable, small marsh islands characterized by the usual three common marsh grasses, *Baccharis*, and little else in the way of vegetation. I have never found colonial birds nesting on them. Occasionally an Osprey will breed on one of them on top of a blind. Northeast I. belongs to the navy and Ospreys have nested

on the structure they have erected there. The only other breeding birds I have noticed are American Black Ducks, Willets, Red-winged Blackbirds, Seaside Sparrows, and Song Sparrows. Oystercatchers are sometimes seen on these islands and herons from nearby colonies frequent them in small numbers.

Site 12, Figure 3. Adam Island. Dorchester Co. May 27. This is a delightful island, not quite a mile long, which belongs to the navy and is quite near the impact area on Bloodsworth I. Twice I have camped here: May 27-29, 1972, and July 13-14, 1974, both times on the Bay side near the north tip on top of a little sandy ridge. During my 1972 camp I found a small fawn in the center of Adam I. and saw a mink (*Mustela vison*) nearby; at night I was serenaded by Clapper Rails and a Barn Owl. In 1977 at the north tip I found a pair of oystercatchers with three large flightless young. Adam I. is largely salt marsh, especially the southern part, but up the center is a dense, and I mean dense, growth of poison ivy, red cedars, small loblolly pines, and *Baccharis*. This center ridge runs most of the length of Adam I. except at the north and south ends; it runs in a north-south direction. I have never walked into the midst of it since it is so dense, but many of the bird nests are visible from outside. The southern part of the island is complex enough so that there are small, tricky tidal guts penetrating it.

The Y on the north end has become mostly closed over by a sand bar that has been growing across it ever since I first came here in 1972. At that time I saw the first oystercatchers for Dorchester County. In 1972 a substantial house on the east fork of this Y had recently burned down. Recently, in 1976 or 1977, the navy repaired what had been a badly deteriorated tower here, constructed a hurricane fence around it and some small buildings (sheds and trailers) and also constructed a helipad with interlocking metal sections (Marston mat?). In 1971 an 81mm mortar was positioned on the west fork of the Y with crates of live rounds and a sand-bagged fox hole next to it. The area around the tower has some substantial trees, some of which were cut down recently, but in 1973 I found two Yellow-crowned Night Heron nests here, one of which was in a large American holly.

Almost all of the herons nest in the central ridge of the island, which is also, when one is in its lee, one of the worst places for mosquitoes I have ever encountered. In 1972 I found two displaced eggs on the west fork of the Y, which at the time I assumed were Laughing Gull eggs. I now believe they were oystercatcher eggs, since I found them nesting at this exact spot in 1977, and have found similarly displaced (tide-strewn) oystercatcher eggs since then at Barren I.

The north end of Adam I. gives a good view of the tidal area south of Pone I., which at low tide is favored by large numbers of gulls and some herons. At evening Adam I. is an excellent spot to count herons returning to their nests on Holland I. from southern Dorchester County. The tower is a great landmark and can be well seen from the distance on a clear day. In years when it was accessible the tower gave an excellent view of the impact area on Bloodsworth I. The various cars, helicopters, and other wrecks marking the target area were easy to see.

Red cedar is the dominant tree of the central ridge, where there are the remains of a few old buildings. Periwinkles and diamondback terrapins (*Malaclemys terrapin*) thrive on Adam I. In 1972 and 1974 I had pitched my tent between a small salt pond and the bay. By 1978 this pond had completely disappeared and filled in. The west side of Adam I. has sod bank at the Bay edge and very slippery, clay footing offshore. On May 27, 1978, one of the Great Blue Heron nests had two large young, and a ground Osprey nest on the Bay shore had three eggs.

Coverage on the various dates in Appendix Table 1 was uneven. For instance, in 1976 James Freeman and I did not get out of the boat on July 3. In 1977 I did not have binoculars. On May 28, 1972, I spent the entire 24 hour period on Adam I., except for several hours when I skipped down to Holland I., but on May 27 I just spent a few hours in the late part of the day, setting up the tent, whereas on May 29 I left soon after waking up. I had to; the no-see-ums were driving me crazy. Because of these variables the coverage was not consistent. But it was consistent enough to make me wonder about some things, such as whether or not Carolina Wren and Northern Cardinal are still resident on Adam I. They used to be, but do not seem to be now. The high heron counts on July 13, 1974, resulted from a deliberate effort to count herons returning to their colonies on Holland I. at dusk. Adam I. is described further in MB 28:101, 30:22, 129-130.

Table 8. Number of breeding pairs of colonial birds and Ospreys, Adam Island, 1972-1978

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Great Blue Heron	8	8	6	4	10	4
Green Heron	x	5	5	-	3	5
Great Egret	-	-	-	-	1	-
Black-crowned Night Heron	x	-	-	-	7	5
Yellow-crowned Night Heron	5	6	4	-	3	8
Total pairs of herons	8+	19	15	4+	24	22
Osprey	4	x	4	3	3	3

Sites 13-19, Figure 3. Holland Island, Dorchester Co., May 27 and June 2. In spite of several earlier visits, it was not until 1978 that the island's several hammocks were all visited and real justice was done in the form of nearly complete coverage of this wonderful island. About one mile in length, Holland I. has five heronries, nesting gulls and terns, a fine roosting area for gulls, terns, and shorebirds, deer trails, old graveyards, and one remaining wood frame house. It is one of the prime areas on the Bay for breeding herons. Formerly there was a thriving community here. I have arbitrarily designated as N (Site 13) the northern half of Holland I. from the house up to the north tip. This house does not appear in Figure 3 but is located due east of the letter "n" in the word "island" of Holland Island Bay. N on its north thick section is characterized by dense growth of *Baccharis*, small deciduous trees such as persimmons, trumpet creeper, poison ivy, some large deciduous trees, and red cedars. Farther down there is a rather open, park-

like section characterized by large American hackberries (Fig. 6), where most of the Yellow-crowned Night Herons and Great Egrets nest and where, unfortunately, several persons were camping on May 27. Below this hackberry hammock is a long, narrow section, dominated by *Baccharis*, poison ivy, and small deciduous trees, that leads right up to the north lawn area of the house. The west side of N is eroding rather badly, especially the north end. Much of N is so narrow that a stone can easily be thrown from one side to the other. There are a few old building foundations and several graves with the surname Parks. Several dozen goats were seen on June 19, 1977. Other trees there include large winged sumac, silver poplars, black locusts, and a domestic pear, the latter a relict from when the island was inhabited.



Figure 6. Sinister looking, Laocoön-like American hackberry roots on northern Holland I., July 3, 1976. Even in the center of this island most big trees have semi-exposed root tangles. Photo by H. T. Armistead.

North Bar (NB, Site 14) and South Bar (SB, Site 15) are predominantly sandy areas that also have some sod bank with *Spartina alterniflora* and other grasses growing higher up on the sand as well as some *Baccharis*. NB and SB are on the north end of the "hook" on Holland Island's west side, as indicated on the map. I had not visited these areas until July 3, 1976, when James Freeman and I went to these bars; the highlights of that trip were 2 Black Skimmers (2nd county record), 1 Black Tern, and suspected but not proven breeding of Herring Gull and Gadwall. On June 19, 1977, 21 active nests of Common Tern (9 w/ 1e, 9 w/ 2e, 2 w/ 3e, 1 w/ 2y) and five of Herring Gull were found (3 fresh scrapes, 1 w/ a recently dead chick, the 5th w/ a 100 watt bulb). Thus the 1978 colonies show a slight increase. The area around these bars is a good place for roosting gulls, terns, and shorebirds. A daily check of this spot, if it were possible, would undoubtedly turn up rarities as well as notable high counts. N, NB, and SB were visited during the afternoon of May 27 by A. M. Tolzman, P. R. Chu, and myself.

The remaining four sites were visited by P. R. Chu and me on the morning of June 2: Southeast Hammock (SE, Site 16), Southwest Hammock (SW, Site 17), West Central Hammock (WC, Site 18), and East Central Hammock (EC, Site 19). Between SE and EC, on a high area in the marsh, is a graveyard with perhaps fifteen graves, most with the surnames Price or Dize. It is free of trees but is overgrown with poison ivy. A well-worn deer trail runs between SE and EC. WC was not actually visited, but I searched it perhaps ten times with 10X binoculars from a distance of 100-200 yards from different angles. It consists mostly of silver poplars but has a single red cedar at the south end and single big American hackberries, one at each end. A deep gut prevented my walking to it and dwindling gasoline mandated against a trip all the way around to the other (west) side of Holland I.

EC is a long but rather narrow hammock composed mostly of American hackberries, red mulberries, black locusts, grape vines, and persimmons, and fringed, as most hammocks in the Bay are, by extensive *Baccharis halimifolia*. I had never visited EC, WC, or SW until June 2. SW is a rather small hammock consisting mostly of silver poplars, many of which have rows of holes indicating the workings of Yellow-bellied Sapsuckers during migration. Nearby is a small patch of big cordgrass, which resembles reed grass; this is the only area I have noticed on the Bay islands where it grows, although surely it must grow elsewhere. It is one of the dominant plants in several mainland marshes, especially along Pokata Creek at Elliott Island.

Table 9. Number of pairs of breeding colonial birds,
Holland Island, 1978

Site	<u>N</u>	<u>NB</u>	<u>SB</u>	<u>SE</u>	<u>SW</u>	<u>WC</u>	<u>EC</u>	<u>Total</u>
Great Blue Heron	2	-	-	10	5	-	2	19
Green Heron	3	-	-	2	2	-	2	9
Little Blue Heron	25	-	-	20	-	-	25	70
Cattle Egret	20	-	-	15	-	5	30	70
Great Egret	20	-	-	20	-	-	7	47
Snowy Egret	30	-	-	45	-	25	40	140
Louisiana Heron	5	-	-	5	-	2	20	32
Black-crowned Night Heron	15	-	-	50	7	20	35	127
Yellow-crowned Night Heron	30	-	-	5	2	-	3	40
Glossy Ibis	5	-	-	15	-	-	20	40
Total pairs of herons	155	-	-	187	16	52	184	594
Herring Gull	-	4	2	-	-	-	-	6
Common Tern	-	-	30	-	-	-	-	30

An empty Boat-tailed Grackle nest was in SW. These empty nests I often see on the islands. These grackles must complete their nesting earlier, during the spring. SE is another predominantly deciduous hammock, although on its west side are a number of loblolly pines, including some dead ones, in one of which was an active Osprey nest. I have previously visited SE on July 14, 1974, July 3, 1976 (with James Freeman), and June 19, 1977. Most of the trees are persimmons. Other plants

include thistles, poison ivy, and *Baccharis*. Bumblebees, cicadas, and monarch butterflies were noted on Holland I.

Most of Holland Island's salt marsh is located in the area of these four southern hammocks, where the "big three" predominate: *Spartina alterniflora*, *Spartina patens*, and *Juncus roemerianus*. There is a much smaller area of salt marsh on the northeast side of the island. But for much of its length Holland I. is several feet or more above the marsh and characterized by large deciduous trees. The deciduous groves north and south of the house are fairly big but I have never seen nesting herons in them. A Willet nest with four eggs was found in *Spartina patens* near SE. At EC as at several other Bay hammocks, such as Frances Gut on Smith I., several very pale adult Black-crowned Night Herons were seen; there is quite a bit of variation in paleness or darkness among adults of this species in this area. See also MB 28:102, 30:21-22, 130-131, 32:87, 33:111-112.

Site 20, Figure 3. South Marsh Island, Somerset Co., June 2. P. R. Chu and I nearly circumnavigated South Marsh counterclockwise from Pry I. to Johnson Point. As we approached the island from the south a Common Loon passed us flying high and in that direct migration straight line that is so typical of migrating loons. This one was late. Only seven active Osprey nests were noticed, the one in the hunt club area, on top of a small outbuilding, having two young and one egg. In 1975 there had been fourteen nests. As in 1975 there was an Osprey nest on the old wreck off Sound Point as well as one in the small deciduous tree grove on the east side of Thomas I. Gut. These are the only trees on the island, consisting mostly of black locusts, but with one other large deciduous tree I could not identify. In 1975 I had found one nest each of Great Blue Heron, Green Heron, Great Egret, Snowy Egret, and Yellow-crowned Night Heron in this little hammock. In 1978 the composition of this small heronry had changed considerably (see Table 3). There is also a red cedar and lots of *Baccharis halimifolia*. Eight oystercatchers were seen on South Marsh I. on June 19, 1975.

We walked around the hunt club. The ladder up to the observation platform had a Fish Crow nest near its top, perhaps the remains of a nest of the same pair that had had 4 large, feathered young on June 19, 1975. The view from here (Fig. 7) is panoramic. In the lodge we discovered a Barn Swallow nest with 4 eggs over the medicine closet, two rooms and eleven yards from the open door. The attractive lodge, with its wood paneled walls, is still in good shape. South Marsh I. is large but not diversified, consisting mostly of *Juncus roemerianus* marsh. However, there are some nice *Spartina patens* meadows, including one near the heronry. There are also some high sandy areas, some extensive *Baccharis* clumps, and a few higher areas with reeds. We noticed for the first time "Public Hunting Area" signs all around the island. At high tide it was easy to skirt around the island very close to shore. The mosquitoes were very bad in the vicinity of the heronry. Over 100 diamondback terrapins were seen, more by far than anywhere else, mostly on the east and north sides. Around the lodge 17 Barn Swallows were in sight at once. See also MB 30:20-21.



Figure 7. South Marsh I., June 2, 1978. View northwest from the Hunt Club roof. Boat-tailed Grackle in foreground. Photo by P. R. Chu.

THE DEAL ISLAND REGION

Site 21, Figure 8. Deal Island Wildlife Management Area, Somerset Co., June 6-7. Since it is not really a Bay island I am not going to spend much time describing Deal I. W.M.A. I have already written about this productive marsh (MB 26:79-81, 27:111-114, 30:19-20). The Great Blue heronry is located in a big grove of large dead loblolly pines near the center of the large impounded area. It is best seen from the dirt road that skirts the west side of the impoundment. This road is accessible from Route 363. This colony did not exist when I visited in 1970 or 1971, but was started in 1972 or 1973. In 1976 there was one Great Egret nest in this colony.

The decline since 1975 is probably directly attributed to the deterioration of the dead trees with each passing year. In this respect and also in its composition of almost exclusively Great Blues, this colony resembles Bloodsworth I. Many of the terns that nest in the Manokin River terneries (Sites 23-25) use the impounded area and its adjacent tidal waters as feeding and resting areas. Many of the herons that feed at Deal I. probably nest on Holland and Smith Islands. The area of the dike between the two bridges on the south side of the dike and next to the Manokin River and its marshes is a good place for nesting ducks. On June 7, 1978, I found the following duck nests there: Gadwall nests w/ 10e and 4e; American Black Duck nest w/ 8e; Blue-winged Teal nests w/ 12e and another predator wrecked one with 5 broken eggs. Female ducks flushed from all these nests except the wrecked one. There is often an Osprey nest or two near the Great Blue heronry and one or two Bald Eagles, usually adults, are seen here occasionally.

Table 10. Number of breeding pairs of Great Blue Herons,
Deal Island Wildlife Management Area, 1973-1978

	7/7 1973	6/8 1974	6/8 1975	6/12 1976	6/25 1977	6/6 1978
Great Blue Heron	70	77	95	75	47	49



Figure 8. Map of Deal Island Region

Site 22, Figure 8. Little Deal Island, Somerset Co., June 6. Little Deal I. was no big deal in 1978 but on June 5, 1971 it sported a thriving heronry of perhaps 200 pairs including all ten heron species. On this day, when I discovered this heronry, I saw 110 Glossy Ibis there (MB 27:111-113). On July 7, 1973, when Sam Payne, Bessie Piver, Margaret

Sickles, and I visited the heronry it contained about 200 pairs of birds, including eight heron species; Great Blue Heron and Cattle Egret were missing this time; the commonest species were Snowy Egret (80 pairs), Glossy Ibis (30 pairs), and Little Blue Heron (25 pairs) (MB 30:19-20). Soon afterward, perhaps in 1974, the colony was deserted.

Most of the birds had nested in trees on the northwest side of the island where erosion still continues to diminish the remaining heronry habitat. In 1978 there were no herons nesting. There is a good mix of vegetation but few pines or cedars. Present are honeysuckle, winged sumac, poison ivy, *Myrica*, *Phragmites*, grape, black cherry, trumpet creeper, silver poplar, sassafras, persimmon, *Baccharis*, thistles, and the usual common marsh grasses on the east side of the island. Most of the trees are on the Bay side. Unique here were Eastern Pewee and Yellow Warbler, which I have never encountered as possible breeders on any other Bay islands. Because Little Deal I. is very close to the mainland, the presence of these two species is less remarkable than it would be out in the Bay proper. Little Deal I. was formerly inhabited. An active Osprey nest was on the channel marker between Little Deal and Deal Islands.

Sites 23, 24, 25, Figure 8. Manokin River tern colonies, Somerset Co., June 6. There are three sizeable mixed tern colonies on the north side of the Manokin River south of the Dames Quarter--Deal Island area. These are Piney Island (Site 23), southeast of Little Deal I., St. Pierre Island (Site 24), south of the mouth of Broad Creek and Crab Point, and an island with no name (Site 25) in Fishing Creek east of Fish I. (which no longer exists) and near the shore.

Previously I have visited this nameless island twice by wading out to it at high tide, an awkward procedure since the water came up to my throat. When I discovered this colony on June 13, 1973, there were 83 Forster's and 79 Common Tern nests. When I visited it the second time on June 27, 1976, there were 17 Forster's and 73 Common Tern nests plus about 50 stubby-tailed flying Forster's Tern young. The difference between the nests of these two species has always been marked on this island. I have described it elsewhere (MB 30:129): Common Tern nests, which were closer to the water, were depressions made in seaweed that had drifted to the limit of the high tide mark. Forster's Tern nests were larger, several inches high, and almost platform-like, constructed of marsh vegetation. On July 14, 1974, a small mixed colony with nests identical to these two kinds was found on Great Cove I. near Bloodsworth I.

The colony on St. Pierre I. was also similar in this respect. However, at Piney I. I could not differentiate between the nests of the two species so they are lumped in Table 11 below. The ratio of Forster's to Common Terns was about 3:1 there. The two gull species I had not seen nesting here before when Bessie Piver, Margaret Sickles, and I visited it on July 7, 1973. At that time many Forster's Terns were seen and I was probably in error when I assumed that the 68 nests we found were all of Common Tern, based on their appearance (MB 30:20). The Greater Black-backed Gull eggs measured 85 X 54, 82 X 51, and 85 X 53mm, the first and

third being beyond the maximum length (82mm) and at or beyond the maximum width (53mm) given for Herring Gull egg measurements by Arthur Cleveland Bent (Life histories of North American gulls and terns, N.Y., Dover, 1963, p. 106). The two Herring Gull eggs measured 77 X 50 and 74 X 52mm.

No name island had seven unseasonal Surf Scoters nearby plus a female Gadwall that flushed from a nest with 11 eggs. On St. Pierre I. a female Mallard flushed from a nest with 6 eggs; here the terns were separated into two subcolonies, the one on the west side having 63 Forster's and 4 Common Tern nests, the one on the east side having 107 Forster's and 88 Common Tern nests. The Common Tern nests in the east colony were all in a marsh to the mainland side of the Forster's Tern nests, within a few feet of them but separate. Seven Greater Black-backed Gulls and 5 Herring Gulls were at Piney I. and Laughing Gulls in very small numbers were snooping around all three colonies. All three of these islands are small, marsh islands with a few *Baccharis* bushes.

A small island at the point between Big Sound Creek and Fishing Creek had only a single Seaside Sparrow; another, at West Point, contained no birds at all. These are the biggest tern totals I have had for these areas, although Mitchell A. Byrd surveyed them from the air and had impressive counts in both 1976 and 1977. Fred R. Scott found large numbers of terns nesting on the Bay islands south of the Maryland-Virginia border in the Tangier I. area on May 29 and 30, 1978. Thirty-two Double-crested Cormorants were seen at Piney I. One of the tern nests there had one extremely small egg, less than half the size of the other.

Table 11. Number of tern nests and their contents at three Manokin River sites, June 6, 1978

Site	Contents:	<u>0</u>	<u>1e</u>	<u>2e</u>	<u>3e</u>	<u>4e</u>	<u>1ely</u>	<u>2ely</u>	<u>1y</u>	<u>Total</u>	
no	Forster's Tern	25	20	23	36	2	2	1	-	109	
name	Common Tern	1	2	18	23	1	-	-	-	45	
	Total										154
St.	Forster's Tern	19	12	48	86	1	3	-	1	170	
Pierre	Common Tern	4	13	25	48	1	1	-	-	92	
	Total										262
Piney	tern (sp)	5	26	45	60	4	1	-	-	141	
	Total										141
	Grand totals									557	557

THE SMITH ISLAND REGION

Site 26, Figure 9. Solomon's Lump, Somerset Co., May 30. P. R. Chu, A. M. Tolzman, and I visited this large light structure (Fig. 10), which is about 0.55 mile from the nearest land and due north of extreme northern Smith I. We were surprised to find many Barn Swallows flitting around and were even more surprised to see 6 active nests in this salty, practically maritime setting. This is the most isolated and farthest offshore site at which I have seen Barn Swallows nesting. Other remote areas

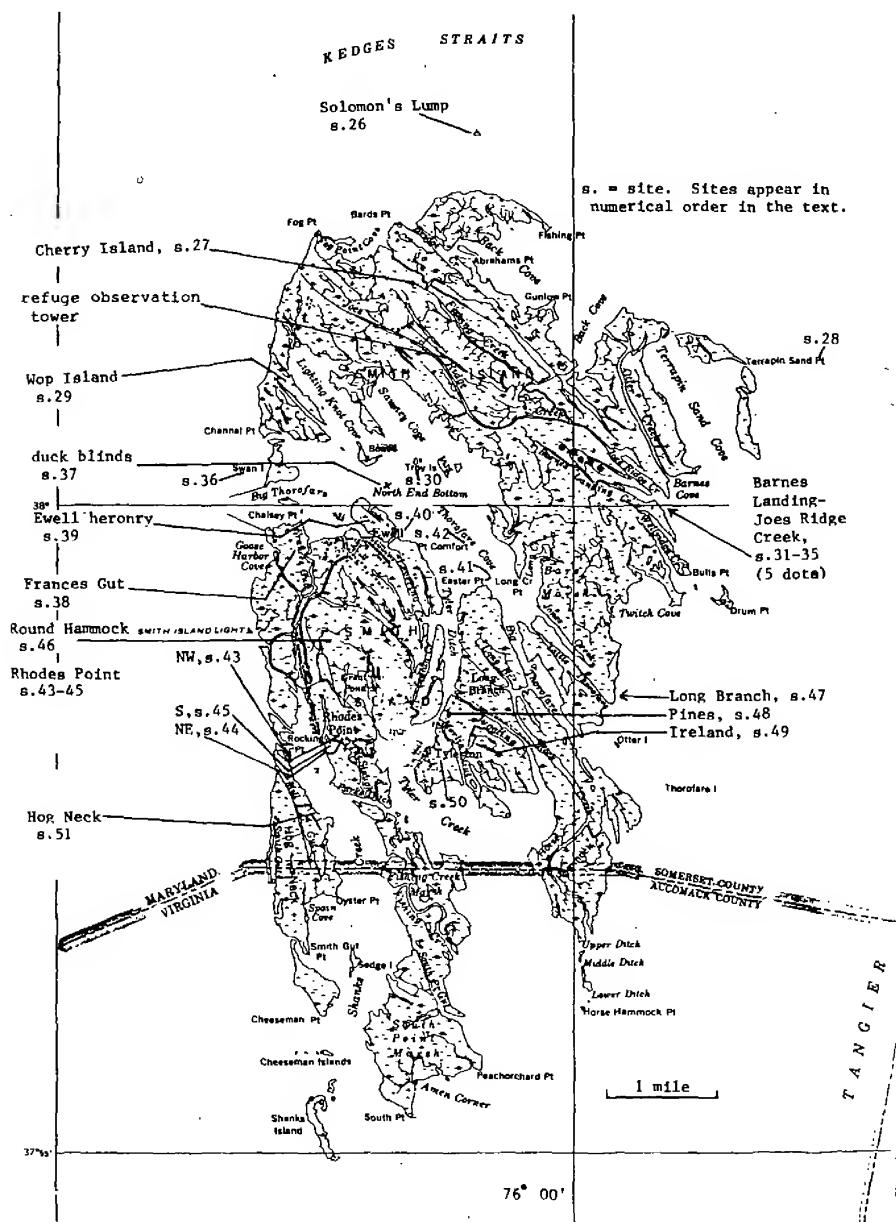


Figure 9. Map of Smith Island Region.



Figure 10. Remote, lonely Solomon's Lump light in Kedges Straits, May 30, 1978. Home of opportunistic Barn Swallows. Photo by P. R. Chu.

where I have found active nests are the hunting lodge off Long Point on South Marsh I. and in a duck blind at Great Cove, Bloodsworth I.

Site 27, Figure 9. Cherry Island (Smith I.), Somerset Co., May 30. Cherry I. is a large hammock dominated by big deciduous trees which P. R. Chu, A. M. Tolzman, and I approached from the Bay side by landing toward the east end of Fog Point Cove (Fig. 11). From here it is relatively easy to walk to Cherry I.; most of the way is through a *Spartina patens* meadow. Access is also possible from the refuge tower area at high tide, but lacking local expertise we opted for this much longer but surer route. Four sting rays were seen as we approached Fog Point. Many jellyfish with dark red center areas were seen. The largest trees on Cherry I. are on its northwest end. These can be seen all the way from Deal I. on a very clear day. Many are American hackberries but there are also black locusts, one with several woodpecker holes, and many black cherries. The southeast end (Cherry I. runs NW-SE) has smaller trees, red cedars, and black cherries, as well as dense masses of honeysuckle, *Myrica*, and poison ivy. The west side of Cherry I. has a very large area where many acres of *Baccharis* extend out into the marsh.

The northwest end is where most of the Great Blue Herons (Fig. 12) and Great Egrets nest, but it also has some night herons. The denser, scrubrier southeast end is where all of the smaller herons nest. In 1974 I corresponded with Robert L. Downing about work he had done at Cherry I. in 1971, when he found 211 pairs of Glossy Ibis nesting there. He was also there in 1972. In 1971 he found a dead Little Blue Heron there which had been banded in 1957 at Montross, Va. I strongly disagree with his suggestion that the vegetation of Cherry I. should be managed in any way for the purpose of affecting heron populations. I think the plants



Figure 11. Low tide at Fog Point Cove, Smith I., May 30, 1978, when nine shorebird species fed on these flats. Looming out of the marsh is Cherry I., a very long hammock, here seen head on. Photo by A. M. Tolzman.

should be completely left alone. I would like to emphasize, however, that I am indebted to him for writing to me about Cherry I. and enclosing copies of his reports and letters. Cherry I. is the largest, and one of the few, wooded hammocks on the Glenn L. Martin National Wildlife Refuge. The only other refuge hammocks are Wop I (Site 29) and the five small ones between Joes Ridge Creek and Barnes Landing (Sites 31-35). See also MB 30:16-17.



Figure 12. Great Blue Heron nest in black locust with adult circling warily, Cherry I., May 30, 1978. Photo by P. R. Chu.

Table 12. Number of breeding pairs of herons, Cherry Island, 1975 and 1978

	1975	1978		1975	1978
Great Blue Heron	30	25	Louisiana Heron	30	20
Green Heron	5	3	Black-crowned Night Heron	75	120
Little Blue Heron	10	25	Yellow-crowned Night Heron	10	10
Cattle Egret	40	45	Glossy Ibis	60	40
Great Egret	40	30	Total	330	348
Snowy Egret	30	40			

Site 28, Figure 9. Terrapin Sand Point (Smith I.), Somerset Co., May 30. P. R. Chu, A. M. Tolzman, and I stopped here in the late afternoon. I had been here once before with Stanley Marshall on June 19, 1975, when I found 3 Common Tern nests (2 w/ 1e, 1 w/ 3e). Although terns were present in 1978 I think they were breeding elsewhere. This is an isolated locality and very shallow. At low tide there are extensive flats in Terrapin Sand Cove, which had many gulls, terns, shorebirds, and ducks in 1975. Oystercatchers probably breed here. Our 1978 bird list: Double-crested Cormorant 30, Cattle Egret 1, Snowy Egret 2, American Black Duck 4, Osprey 2, American Oystercatcher 2, Black-bellied Plover 1, Willet 5, Red Knot 2, Short-billed Dowitcher 7, Semipalmated Sandpiper 45, Greater Black-backed Gull 5, Herring Gull 45, Common Tern 3, Seaside Sparrow 3. These are low, marshy islands with many sandy and muddy areas. They have no vegetation other than the marsh grasses and a few *Iva* and *Baccharis* bushes.

Site 29, Figure 9. Wop Island (Smith I.), Somerset Co., May 29. P. R. Chu, A. M. Tolzman, and I visited Wop I. for about one hour. It is located in the Martin refuge on the west side of Smith I. Most of it lies between Lighting Knot Cove on its northeast side and a small, straight gut that runs almost clear through the island on its southwest side. The mosquitoes here were among the worst we encountered anywhere. I have described Wop I. before (MB 30:14-15). It is the first hammock north of the inlet. Just north of Wop I. is a small *Baccharis* hammock on the Bay shore with a circular pond on its northeast end. Most of the vegetation of Wop I. consists of *Baccharis*, poison ivy, honeysuckle, *Myrica*, winged sumac, and *Iva*, but on its southeast end it thickens somewhat and there are big deciduous trees and red cedars. Here also Lighting Knot Cove has eroded this hammock. The eroding clay bank is several feet high. This colony greatly declined after 1973. Vegetatively it seems just as attractive to herons in 1978 as it was in 1973. The reason for the decline is unknown.

Table 13. Number of breeding pairs of herons, Wop* Island, 1973, 1975, and 1978

	1973	1975	1978		1973	1975	1978
Green Heron	5	5	3	Black-crowned Night Heron	45	-	5
Little Blue Heron	33	-	-	Yellow-crowned Night Heron	3	9	15
Great Egret	-	1	-	Glossy Ibis	70	-	-
Snowy Egret	15	-	-	Total	219	16	23
Louisiana Heron	48	1	-				

* Onomatopoeic word derived from the night herons' call.

Site 30, Figure 9. West Troy Island (Smith I.), Somerset Co., May 28. A. M. Tolzman, P. R. Chu, and I went to this tiny place, which is little more than a sod bank overgrown with marsh grass. It is due north of Ewell on the Martin refuge. We saw 135 Double-crested Cormorants, 1 Common Loon, 1 Little Blue Heron, 3 Glossy Ibis, and 1 Greater Black-backed Gull, most of which were flyovers. On June 24, 1977, Fred R. Scott and I passed through Ewell and could see that West Troy I. was swarming with terns; although we did not stop here, there must have been many more than in 1978. I cannot give the reason for the decrease in the tern colony.

Table 14. Number of breeding pairs of Common Terns, West Troy Island, 1973, 1975, and 1978

Contents:	<u>1e</u>	<u>2e</u>	<u>3e</u>	<u>4e</u>	<u>5e</u>	<u>1ely</u>	<u>2ely</u>	<u>1y</u>	<u>2y</u>	<u>Total</u>
Date										
6/2/73	29	39	34	2	3	-	-	-	-	107
6/21/75	60	64	49	2	-	1	1	8	3	188
5/28/78	3	10	14	-	-	-	-	-	-	27

Sites 31-35, Figure 9. Barnes Landing hammocks (Smith I.), Somerset Co., May 31. P. R. Chu and I approached these hammocks by going up the refuge channel toward the observation tower and turning east down Joes Ridge Creek. I did not know how to get to them, so we poked along this creek for a while and happened onto the creek (shown on Fig. 9) that goes off the south side of Joes Ridge Creek near its mouth and extends northwest where it meets another small creek that branches off to the southeast and joins Barnes Landing Creek. The junction of these two small creeks separates Site 31 from Site 32, but the little spur creek shown extending northwest from the junction goes right up to Site 31. Since I could find no names for these hammocks I numbered them Sites 31 to 35, going from northwest to southeast. They are indicated by the five large dots on Figure 9.

From the refuge tower in June 1973 I had observed flocks of Glossy Ibis descending into this area, undoubtedly to nests, but I have not seen any here at other times. On June 19 and 20, 1975, I examined Site 31 from a distance at several angles and estimated that there were ten active Great Blue Heron nests, some being clearly visible even from a few thousand feet. The several loblolly pines at Site 31, although not tall, are easily discernible as pines from a great distance. There are also a few dead pines plus live black cherries, red cedars, American hackberry, *Baccharis*, and the expected poison ivy. Site 31 is a small, round hammock.

Site 32 is on the east side of the juncture described above. It is also a small, rather circular hammock. Vegetation includes masses of honeysuckle, an unidentified species of deciduous tree, poison ivy, red cedar, winged sumac, *Baccharis*, and wax myrtle, plus four or five black cherries. Site 32 had four unoccupied, large (Great Blue or night heron) nests. Site 33 is another small, roundish hammock; the dominant vegetation is *Baccharis*, wax myrtle, and poison ivy, but there also is honeysuckle, winged sumac, and one red cedar. There was a large, unoccupied

heron nest in the cedar. Site 34 is an unremarkable small hammock on the edge of the creek leading in from Joes Ridge Creek. We tied up the boat here for our walking exploration of Sites 32-35, which was cut short slightly by ominous-looking dark clouds coming up from the southwest. The most notable plants at Site 34 were four American hackberry trees.



Figure 13. Joes Ridge Creek, Smith I., May 31, 1978, with dense, uniform swales of black needlerush. In the background are the Barnes Landing hammocks. Photo by P. R. Chu.

Site 35, the largest and most complex of the five hammocks, is separated from Site 34 by a very small gut. Sites 32 and 33 are really extensions of Site 35, but are separated by small stretches of high marsh. The surrounding marsh is mostly *Juncus roemerianus* (Fig. 13). The larger trees at Site 35 are American hackberries, black cherries, and winged sumac. The bushy-sized plants are wax myrtle and groundsel-tree. There are also roses, red cedars, and poison ivy. Site 35 (shown in part in Fig. 14) is a very long hammock with a long, old, man-made ridge or low dike that is covered with thistles and *Baccharis*. This dike is on the south side of the site. There are also some old, straight drainage ditches here. Site 35 is large enough and well enough vegetated to support a big heronry. The Barnes Landing area is unique in being the only hammock on the eastern side of Smith I. I was surprised to find a Carolina Wren in this very isolated area. House Wren and Eastern Kingbird we did not encounter.

Table 15. Number of breeding pairs of herons, Barnes Landing, 1978

Site Number:	<u>31</u>	<u>32</u>	<u>33</u>	<u>34</u>	<u>35</u>	<u>Total</u>
Great Blue Heron	11	2	-	-	-	13
Black-crowned Night Heron	2	-	-	-	2	4
Yellow-crowned Night Heron	12	-	-	-	6	18
Total	25	2	-	-	8	35



Figure 14. Prime habitat: Barnes Landing hammock (Site 35), May 31, 1978.
Photo by P. R. Chu.

Site 36, Figure 9. Swan Island (Smith I.), Somerset Co., May 28, 29, 31; June 1. On the north side of Big Thorofare inlet at the side of the Bay, this is an attractive area; its most notable feature is a very large sand dune, much of which is over ten feet high. This is eroding, but only on its south side. On the Bay side, Swan I. is bounded by sod bank where I found breeding Gadwalls in 1975 (MB 31:134). On its east side there is developing salt marsh, with small, sandy, easily waded guts. Still farther east lie more developing marsh and extensive, exposed flats at low tide. The flats, which are attractive to shorebirds (cf. Table 21), were the main reason for the four visits. Here is where Black Skimmers occur most commonly on Smith I.; a group of 76 was here on June 19-23, 1975. Oystercatchers probably nest at Swan I., but no terns seem to, even though they roost here in small flocks. There are some big clumps of *Phragmites* on the dune as well as morning glories. We found a Willet nest with 4 eggs on the west side of the dune in a grassy area on May 28. Lying close to the heronries of Frances Gut, Wop I., and Cherry I., Swan I. is a good place to see herons flying over. Most of the American Black Ducks seen were feeding along the Bay shore. There are also some attractive flats visible from here on the south side of the inlet, but they require a telescope for positive identification of anything smaller than a large heron. There is little vegetation other than *Phragmites* and *Spartina alterniflora*, but there are a few wax myrtles, in one of which was an empty Boat-tailed Grackle nest. Swan I. is part of the Martin refuge.

Site 37, Figure 9. Big Thorofare duck blinds (Smith I.), Somerset Co., May 30. There are five low blinds in the North End Bottom area, near the Martin refuge boundary. I had never visited them before because I had not seen any "blind" birds (Osprey, Common Grackle, Green Heron) on them; there were none this time. There were plenty of Barn Owl pellets on the floor of two of them, but no signs of nesting activity.

Site 38, Figure 9. Frances Gut hammock (Smith I.), Somerset Co., May 30. There are several hammocks here in close proximity in an area that some local people refer to as Over-the-gut. Frances Gut hammock is located south of the south jetty of the inlet. It was approached from Goose Harbor Cove where a landing was made close to the base of the south jetty. I walked out to within two hundred feet of the end of the jetty noting little life other than small oysters and many small flying insects swarming over the rocks as the tide fell. Spotted and Semipalmated Sandpipers were feeding around the exposed rocks. The hammocks area is landward from the jetty and proceeds diagonally away from it and the Bay shore toward Frances Gut. The vegetation in the area of the heronry, which was on the biggest and most southern hammock, was predominantly *Baccharis* and poison ivy, but there were also red cedars and loblolly pines, plus many persimmons and some white poplars. This area is directly across from the westernmost house in Ewell and the generator. At the south end of the hammock the car dump (Fig. 15) and new sewage treatment facility is readily seen. There are also many roses. I had never visited this area before or even noticed herons going into it, but it is quite possible they may have nested here before. Frances Gut has the largest Black-crowned Night Heron colony I have seen on the Bay.



Figure 15. Penn Chu after recording Marsh Wrens with parabolic reflector, Ewell-Rhodes Point Road, May 31, 1978. The island car heap (background) and the nearby dump are favored by Fish Crows and Boat-tailed Grackles. Photo by H. T. Armistead.

Site 39, Figure 9. Ewell-heronry (Smith I.), Somerset Co., June 1. This hammock, which seems to be a greatly overgrown old spoil area, hardly merits the term heronry any more, as may be seen from Table 16. It is across the channel from the town of Ewell. Roughly rectangular it slants in a northwest to southeast direction, in keeping with the disposition of much of the rest of Smith I. It is quite high and much of the northwest side is delightfully open, grassy, and even rolling, which

gives it a rather artificial aspect, as indeed, to some extent it is. In 1973 most of the heronry was in the southeast half of this island, which was extremely dense, overgrown with poison ivy, honeysuckle, and deciduous trees ten to twenty feet tall. In 1975 this area was more open and easier to traverse. In 1978 it was increasingly open but still something of a struggle. Perhaps a reason for the greater openness was a herd of goats that P. R. Chu and I saw in 1978. There were about a dozen, mostly billies, but we saw at least two kids, including one very small one that Chu tape recorded. In the center is a rather high, open ridge. The open area on the northwest side described above is studded with wax myrtle. Other common plants include sweet gum, winged sumac, *Baccharis*, roses, thistles, black cherries, three Japanese black pines (!), loblolly pine, red cedars, and one short-needed pine that I could not identify. Active Fish Crow nests were found in 1973 and 1975. Up to 14 Fish Crows were in sight at once in 1978. Two Bank Swallows in 1978 were late migrants, there being no suitable nest site for them for many miles.

Table 16. Number of breeding pairs of herons, Ewell-heronry, 1973, 1975, and 1978

date:	6/2&4/73	6/21/75	6/1/78
Green Heron	8	2	3
Little Blue Heron	20	5	-
Snowy Egret	-	5	-
Louisiana Heron	30	5	1
Black-crowned Night Heron	30	25	-
Yellow-crowned Night Heron	40	10	4
Glossy Ibis	60	5	1
Total	188	57	9

Site 40, Figure 9. Ewell-town (Smith I.), Somerset Co., May 27-June 2. Located almost directly in the center of the maze of marsh, tidal guts, and hammocks that is Smith I., the town of Ewell is an ideal vantage point from which to look for birds. Connected by road (Fig. 15) to Rhodes Point, over a mile to the south, Ewell boasts several side streets at the ends of which are grown-over, scrubby areas--little oases of trees and cover for migrating landbirds as well as the largest diversity of breeding landbirds on the island. East of the church, between Ewell School and the northeast side of town, is a trail through a small patch of woods with a dense growth of honeysuckle and poison ivy; the trees are mostly sweet gum and silver poplar with a few small stands of loblolly pine.

On the south side of Ewell a road extends to the southeast with the marsh on its south side; it continues past the last houses for several hundred yards through dense undergrowth along a trail that would be ideal for mist nets and fall banding. Toward the end of the trail is a small heronry with an estimated 12 pairs of Yellow-crowned Night Herons and 2 Black-crowned Night Herons. The area across from the beginning of this road, on the northwest side of the main road, is also good and terminates

at the end of the road on the west side of Ewell; where there is a delightful house (now being turned into a restaurant) with attractive plantings, overlooking the inlet and Frances Gut.

During the fall there is a small flight of hawks, especially Sharp-shinned Hawks and American Kestrels, as well as flickers, most of which fly north through and over Ewell. The dump for trash and the one for old cars south of it (Fig. 15), which both lie in the marsh between Ewell and Rhodes Point, attract Fish Crows and Boat-tailed Grackles. The din from the big gullery at Point Comfort is heard continuously from the east side of Ewell; it is only a few hundred yards away. Because Ewell is surrounded by heronries, herons are almost constantly in sight flying over the town. Cattle Egrets frequent the cemetery, especially in the early morning. In spite of the considerable area of lawn, plantings, and scrub around Ewell, there are many bird species that do not seem to breed. Most of the landbirds that do breed do so in small numbers.

Each morning from May 28 to June 1 the first thing P. R. Chu, A. M. Tolzman, and I did was walk around the town birding. On the morning of May 28 there was a small, late spring flight. On the evening of May 29 several Swainson's Thrushes flew over calling in the dark. Other interesting species seen at Ewell were: May 29, 1 Mourning Dove, American Redstart, Bobolink, 1 Indigo Bunting, 2 Red Crossbills (seen by Chu), and 1 very late Swamp Sparrow; June 1, Common Flicker and American Robin. An attempt was made to listen for Black Rails on the marsh road south of town during the evening of June 1 at what seemed to be a good location with ideal weather conditions, but we had no success. I have tried listening for them here before with no luck in 1975.

What the three Ewell lists in Table 21 indicate to me is that one can see a good number of bird species on Smith I. (at least in the Ewell area) on foot without recourse to a boat. In Ewell we encountered Alice V. Middleton, who lives on the south side of town; she has made some attractive postcards on Smith I. subjects, one of which is a map of Smith I. showing the names of all its residents circa 1845 and where they lived, including many areas now uninhabited. Mrs. Middleton has an interesting collection of artifacts, including Indian materials and old shards, some from Hog Neck. I saw two box turtles (*Terrapene carolina*) in Ewell, a male on June 1 and a female on May 29--presumably naturally occurring turtles. On Oct. 2, 1976, when I was in Ewell with Elmer and Jean Worthley and the Baltimore Chapter of the M.O.S., Elmer Worthley caught a rough green snake (*Opheodrys aestivus*) that had been in a shrub in a backyard.

Sites 41-45, Figure 9. Smith Island gull colonies, Somerset Co., May 28 and 29. P. R. Chu, A. M. Tolzman, and I visited five colonies, all of which are unnatural in that they are fill areas or spoil banks. Easter Point (Site 41, sometimes called Eastern Point) and Point Comfort (Site 42, or Ewell gullery) I have described in MB 30:18, 31:131-133. The Rhodes Point South colony (Site 45, or S), located south of the channel between Rhodes Point and Tylerton, west of the Slough, and north of Parks Ditch, was discovered by Mitchell A. Byrd while he was conducting

aerial surveys of colonial birds in 1977. It is located on a round, high area overgrown by *Phragmites*. We walked right through the center of this *Phragmites* bed, but the gulls do not nest in here. Instead, they prefer the edges where the vegetation is lower, consisting of grasses, small *Baccharis*, occasional very small red cedars, and black cherries. Most of the nests are on the west side of this old spoil area. Rhodes Point south colony was easily reached by walking through the marsh from the channel between the towns.

On the north side of the channel are two very small gull colonies that I have dubbed Rhodes Point Northwest (Site 43, or NW) and Rhodes Point Northeast (Site 44, or NE), both of which are on high spoil areas. These two were more difficult to walk to from the channel. East of NW and NE is another spoil area that did not have any gulls. NW has a bare, earth area strewn with empty mussel shells on which oystercatchers had been feeding. Tolzman found two American Black Duck nests here with 8 eggs and 9 eggs and a Willet nest with 4 eggs. NE was near an active Osprey nest on the roof of a blind, one of only a few Osprey nests between Ewell and the state line. We felt that oystercatchers may nest in both NW and NE. I had never visited the Rhodes Point gull colonies.

The Easter Point colony I had been to in 1973 and 1975. In 1973 it was quite unvegetated; it was easy to locate hundreds of gull nests. But by 1975 it had grown over a great deal; gull nests were harder to find. Recent dumping of new spoils (in 1977?) resulted in a very open colony (Fig. 16) in 1978 with a four to seven foot high earth dike enclosing most of the colony and scattered, often large *Phragmites* beds within the dike. Most of the gulls nested within the dike, but there were also nests on the sides and top of the dike and outside of it with some all the way down to the berm line on Thorofare Cove as well as some in the natural salt marsh south of the south part of the dike. A muskrat skull was found here, and there was an empty but recent Boat-tailed Grackle nest in one of the small trees adjacent to the dike. As in other gull colonies one is struck by the wide diversity of nest sites ranging from bare scrapes with little nesting material surrounded by many yards of bare earth to well concealed nests amid dense bushes and trees with deep cups and a mass of nesting material. Also, as in other colonies, there were many Greater Black-backed Gulls. Undoubtedly a few of the nests reported here as Herring Gull nests were actually Greater Black-backed Gull nests similar in size and egg measurements to those of hundreds of nearby Herring Gull nests. The only way to differentiate them is to watch for an adult gull to alight. One Greater Black-backed Gull nest with two eggs was found at Easter Point and another with two young was at Point Comfort.

The colony near Ewell (Point Comfort) is also huge. I had visited it in 1975 and established several Greater Black-backed Gull breeding records. In 1975 and 1978 it was heavily vegetated making location of nests difficult. Conditions for breeding success seemed worse at Point Comfort than at Easter Point or Rhodes Point. There were hordes of black flies and mosquitoes. Some of the chicks were covered with insects. Mice or voles were present. A further disadvantage for the

Herring Gulls may have been the higher number of Greater Black-backed Gulls. Some Smith Islanders mentioned that foxes had been introduced here, and several of the Islanders believed the federal government had released them. There was quite a bit of confusion about who had turned them loose and why. One person even said that someone was going to release wolverines to eliminate the foxes! There were many pipping eggs at Point Comfort, which was blanketed with thistles in most areas. At Easter Point one of the Herring Gull nests had a very small egg. The two larger eggs measured about 75 X 48 and 65 X 48mm respectively while the small one was only 35 X 28mm.



Figure 16. Herring Gull chicks, Easter Point, Smith I., May 28, 1978. Few hatch this early. Photo by A. M. Tolzman.

The three of us independently estimated the percentage of the nests we had found; our correlation was close. Tolzman felt we had found two-thirds of them. Chu thought we had found 60-80%. My estimate was 65%. Based on these figures and certain of my gut reactions I have chosen to estimate that we located two-thirds of the nests (Table 17). Some official estimates of the number of pairs of Herring Gulls breeding on Smith I. have indicated several thousand pairs, which I feel is too high.

Site 46, Figure 9. Round Hammock (Smith I.), Somerset Co., May 31. Round Hammock lies north of the town of Rhodes Point. P. R. Chu and I easily reached it at high tide from Ewell by way of Levering Creek, Indian Creek, Jeans Gut, Great Pond, and the smaller guts west and north of Great Pond. I had never been there before, but had observed the hammock at length from the Ewell-Rhodes Point road on June 19, 1975 (see below). Round hammock is surrounded by a low, narrow old dike similar to the ones around Ireland and Pines; the dike is overgrown by *Baccharis halimifolia*. There is a big *Baccharis* patch on its east side. It

Table 17. Herring Gull nest data and estimated number of breeding pairs at five Smith Island sites, 1978

Contents:	0	1e	2e	3e	4e	1yle	1y2e	1y3e	2yle	1y	2y	Est.	
												Nest Count	Grand Total
E.Point	48	57	114	335	1	1	3	1	3	1	-	564	846
PointC.	56	38	38	140	-	1	4	-	2	-	1	280	420
R.Pt.S.	6	1	13	100	-	1	5	-	1	-	-	127	190
R.Pt.NW	-	-	1	2	-	-	-	-	-	-	-	3	5
R.Pt.NE	10	2	4	13	-	-	-	-	-	-	-	29	43
Total	120	98	170	590	1	3	12	1	6	1	1	1003	1504

consists mostly of large deciduous trees, especially American hackberries and black cherries. As is evident from Table 18, the heronry had declined greatly from 1975, when I had estimated 245 pairs of herons of 9 species and had seen up to 57 herons at one time flying over it. In 1978 there was an active Osprey nest nearby on an old wire structure (duck trap?).

Table 18. Number of breeding pairs of herons, Round Hammock, 1973 and 1978

	1975	1978		1975	1978
Great Blue Heron	10	-	Louisiana Heron	35	7
Green Heron	5	3	Black-crowned Night Heron	25	5
Little Blue Heron	35	10	Yellow-crowned Night Heron	5	20
Great Egret	5	-	Glossy Ibis	60	-
Snowy Egret	65	10	Total	245	55

Site 47, Figure 9. Long Branch (Smith I.), Somerset Co., May 29. This is a rather high, formerly inhabited, open area on the east side of Tyler Ditch north of Pines. A. M. Tolzman, P. R. Chu, and I visited it. From a distance its most distinctive feature is a strung out group of red cedars, but there are also American hackberries, black locusts, black cherries, and silver poplars. The trees are not dense enough and this site is not far enough off the channel to be suitable for a heronry, but there were two heron nests (probably night heron) in red cedars. We found two dead goats and several ruins. There was a huge *Baccharis halimifolia* with a circumference of over one foot. Among the ruins was a well surrounded by a brick and cement wall. Bird list: Eastern Kingbird 1, Barn Swallow 2, Fish Crow 3, Common Yellowthroat 1, Seaside Sparrow 3, Song Sparrow 2.

Site 48, Figure 9. Pines hammock (Smith I.), Somerset Co., May 29. P. R. Chu, A. M. Tolzman, and I explored Pines for one hour at midday. I had never been there before in spite of the easy access, just a few hundred feet from the east side of Tyler Ditch. The remains of an old church foundation and a few other traces of old buildings persist. It is surrounded by a low earth dike that still provides a tolerably good trail, even though it is overgrown by sizeable red cedars and *Baccharis*. There is a large, circular pond at the east end, which the dike also encircles. A grove of mature loblolly pines and numerous dead trees is at the

southeast side, where there is a large and active Osprey nest in a dead red cedar. There are many woodpecker cavities in the dead trees. Several red cedars along the dike, especially on the north side, bear night heron nests (Fig. 17 and cover photograph). Pines is just south of the area called Long Branch and west across a gut from Ireland. Two boys told us there were foxes in this area. The trees in this hammock are mostly big deciduous ones including American hackberry and black cherry. Tolzman and Chu revisited Pines briefly on May 30 for photographic and sonographic purposes respectively. Chu recorded forty-one song types from the one male Carolina Wren there.



Figure 17. Yellow-crowned Night Heron nest in red cedar at Pines, Smith I., May 29, 1978. The commonest of the ten heron species here with thirty-five pairs. Photo by A. M. Tolzman.

Site 49, Figure 9. Ireland (Smith I.), Somerset Co., May 30. This is a substantial hammock east of Tylerton, easily reached at high tide by going east off Tyler Ditch onto Merlin Gut and then taking a left (going north) up a large, open gut that goes right up to the west edge of Ireland. I had been there once before, on June 4, 1973, when, lacking good maps, I approached Ireland from the southeast, and attained it with some difficulty. At that time I scrambled the name in my head thanks to some Freudian mishap and it appears as Kelly in my March 1974 *Maryland Birdlife* article, perhaps because I was preoccupied with Grace Kelly, the best known member of the ultimate Philadelphia Irish family. Anyway, as if this were not bad enough, I also failed to make many notes on the vegetation of Ireland either in 1973 or 1978, except to note that there were roses and bumblebees in 1978. However, I have a clear memory of a big group of large deciduous trees, probably composed mostly of American

hackberries and black cherries. I also remember a large common fig (*Ficus carica*) I saw there in 1973, a reminder of the days when Ireland was inhabited. Figs are common along the lower Bay in settled areas, sometimes growing to twenty feet or more, but dying way back in hard winters. In 1978 I went around the outside of Ireland on an extremely overgrown, old dike similar to the ones around Round Hammock and Pines that was covered with poison ivy, *Baccharis*, and red cedars. On this dike I flushed a Willet off its nest under a *Baccharis* bush and in *Spartina patens*. The nest contained 4 eggs. In 1973 I had gone inside of the dike and walked through the center of the hammock. The next time I go I will make more complete notes on the vegetation.

Table 19. Number of breeding pairs of herons, Ireland, 1973 and 1978

	1973	1978		1973	1978
Great Blue Heron	5	5	Louisiana Heron	30	3
Green Heron	5	2	Black-crowned Night Heron	25	8
Little Blue Heron	70	15	Yellow-crowned Night Heron	15	25
Cattle Egret	40	-	Glossy Ibis	35	-
Great Egret	10	15	Total	285	93
Snowy Egret	50	20			

Site 50, Figure 9. Tylerton (Smith I.), Somerset Co., June 1. P. R. Chu and I walked all around Tylerton in mid-morning. We met and talked with the bird carver, Paul W. Marshall, Stanley Marshall's brother, and photographed some of his carvings: a pair of Green-winged Teal and a male Common Goldeneye. There are several good-sized trees in Tylerton but very little in the way of brushy areas and grown-up lots such as might support Carolina Wrens, which we did not find. Bird list: Herring Gull 6, Royal Tern 1, Eastern Kingbird 1, Barn Swallow 7, Purple Martin 10, House Wren 1, Gray Catbird 1, European Starling 9, Common Yellow-throat 2, American Redstart 1f (late migrant), House Sparrow 9, Red-winged Blackbird 3, Savannah Sparrow 1 (very late migrant), Song Sparrow 2.

Site 51, Figure 9. Hog Neck (Smith I.), Somerset Co., June 1. P. R. Chu and I visited Hog Neck hammock in mid-morning. This was my first trip there, although I had observed it from a distance in the summers of 1973, 1975, and 1977, at which times I had noted a few Great Egrets and Great Blue Herons and had written them off as the only colonial inhabitants. Hog Neck hammock, which lies less than one-half mile north of the Maryland-Virginia border, is easily reached at high water from the east on Shanks Creek. The predominant trees are large American hackberries but there are also black cherries, a sizeable loblolly pine, a red cedar, much poison ivy, *Baccharis*, wax myrtle, honeysuckle, winged sumac, roses, and some asparagus. The south end, where the night herons were, has few trees but sports a large dense area of *Baccharis*, poison ivy, and wax myrtle. The interior of the hammock is fairly easy to walk and has many pokeweeds as well as a rather large depression or sink area with gradual sloping sides and fresh water. I do not know whether this is a natural sink hole. Hog Neck was formerly inhabited as were many now uninhabited hammocks such as Long Branch, Pines, Ireland, Lower Hooper I., and Little Deal I.

Table 20. Complete bird lists on selected dates: Barren, Bloodworth, and Adam Islands

site number:	s.1	2	3	4	5	6	9	9	9	9	9	9	9	9	9	9	9	9	12	12	12	12	12	12	12	12
site:	Barren Island						Bloodsworth Island												Adam Island							
month:	6	6	6	6	6	6	7	8	5	5	7	7	7	6	7	6	5	6	5	5	5	7	7	7	6	5
day:	4	4	4	4	4	4	2	7	29	19	5	13	14	19	3	19	27	2	27	28	29	5	13	14	19	27
year:	78	78	78	78	78	78	67	71	72	73	73	74	74	75	76	77	78	78	72	72	72	73	74	74	77	78
Common Loon	-	-	-	-	-	1	-	-	1	7	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-
Horned Grebe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1d
Double-crested Cormorant	-	-	1	-	-	-	-	-	x	-	1	2	-	9	2	10	85	12	1	5	1	1	4	-	-	1
Great Blue Heron	x	-	-	-	7	3	x	x	x	x	x	x	x	200	x	x	x	x	10	x	x	x	x	x	x	4
Green Heron	1	-	-	1	-	1	x	x	x	6	x	x	x	8	-	x	8	-	3	x	x	x	1	x	x	2
Little Blue Heron	-	-	-	-	-	-	-	x	x	1	x	2	x	1	8	6	1	-	4	12	x	x	115	-	-	2
Cattle Egret	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2	-	-	6	-	-	4
Great Egret	x	-	-	-	1	1	x	x	x	x	x	x	x	10	x	-	1	5	3	5	x	x	1	-	x	2
Snowy Egret	-	-	-	-	1	-	x	x	x	x	x	x	x	-	15	-	8	-	20	35	x	x	210	x	-	20
Louisiana Heron	-	-	-	-	-	-	1	3	-	1	2	1	x	2	6	1	10	3	2	x	-	1	63	-	-	3
Black-crowned Night Heron	-	-	-	-	-	-	x	10	-	1	1	-	x	6	24	4a	8	-	6	12	x	-	55	x	x	10
Yellow-crowned Night Heron	-	-	-	-	-	-	3a	5	-	2	-	-	-	-	1a	2a	-	-	1	7	-	5	35	-	x	7
Least Bittern	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Glossy Ibis	-	-	-	-	-	-	-	1	-	1	3	6	x	1	8	-	-	-	29	30	-	4	110	x	-	-
Whistling Swan	-	-	-	-	-	-	-	-	1d	-	-	-	-	-	-	-	-	-	-	1d	-	-	-	-	-	-
Mallard	1f	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
American Black Duck	2	-	-	-	2	11	-	x	2	6	7	-	-	7	-	-	3	-	2	2	1	4	-	-	-	4
Blue-winged Teal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Oldsquaw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1d	-	-	-	-	-	-	-	-	8d
Surf Scoter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2d
Black Scoter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1d
Red-breasted Merganser	-	-	-	-	-	-	-	-	-	-	1f	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Marsh Hawk	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
Osprey	2	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x	x	x	5	5	x	x	x	x	x	5
Clapper Rail	-	-	-	-	-	-	1	-	2	5	4	-	1	-	-	-	-	-	1	8	2	2	-	-	-	-
American Oystercatcher	-	3	2	2	-	1	-	-	-	-	-	1	-	-	1	4	2	-	4	4	5	1	2	1	5	2
Semipalmated Plover	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Black-bellied Plover	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	3	-	-	2	x	-	-	-	-	-
Ruddy Turnstone	-	3	-	-	1	-	-	-	1	-	-	-	-	-	-	-	12	-	-	3	-	-	-	-	-	5
Spotted Sandpiper	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1
Willet	1	-	1	2	2	4	x	x	x	9	10	x	4	10	x	x	10	x	7	6	x	6	2	1	-	6
Lesser Yellowlegs	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Red Knot	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1
Pectoral Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Least Sandpiper	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	9	-	6	2	x	2	-	-	-	-
Dunlin	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	30	-	25	4	x	-	-	-	-	6
Short-billed Dowitcher	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	3
Semipalmated Sandpiper	-	20	16	-	-	-	-	x	-	-	-	-	-	-	-	-	20	-	3	10	x	-	1	-	-	9
Sanderling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Greater Black-backed Gull	-	-	1	-	-	-	-	-	x	x	1	x	x	5	7	-	3	-	3	35	x	6	2	x	-	-

site number:	s.1	2	3	4	5	6	9	9	9	9	9	9	9	9	9	9	9	9	9	12	12	12	12	12	12	12	12
site:	Barren Island						Bloodsworth Island												Adam Island								
month:	6	6	6	6	6	6	7	8	5	5	7	7	7	6	7	6	5	6	5	5	5	7	7	7	6	5	5
day:	4	4	4	4	4	4	2	7	29	19	5	13	14	19	3	19	27	2	27	28	29	5	13	14	19	27	27
year:	78	78	78	78	78	78	67	71	72	73	73	74	74	75	76	77	78	78	72	72	72	73	74	74	77	78	78
Herring Gull	-	45	100	-	-	-	x	x	x	x	20	175	x	20	165	x	25	-	5	185	x	50	35	x	-	x	-
Ring-billed Gull	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-	-	-	3	3	x	-	-	-	-	-	-
Laughing Gull	-	14	20	-	-	-	x	x	x	x	x	x	x	115	-	20	5	35	65	x	x	65	x	-	x	-	-
Forster's Tern	-	-	-	-	-	-	-	x	-	-	2	-	-	-	-	3	3	1	3	2	8	4	-	15	-	-	
Common Tern	-	x	-	-	-	-	x	-	x	-	2	2	x	25	-	17	7	2	9	x	4	4	x	4	4	-	-
Little Tern	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	3	x	-	2	-	-	-	1	
Royal Tern	-	5	2	-	-	-	-	-	-	5	-	-	-	-	2	-	1	2	6	7	-	-	-	-	-	-	-
Caspian Tern	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Barn Owl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1d	-	1	1	1	-	-	-	-	-	-	-
Chimney Swift	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	x	-	-	-	-	-	-	-
Common Flicker	-	-	-	-	-	-	-	-	-	1d	-	-	-	-	1d	1	-	-	1d	-	-	-	-	-	-	-	-
Eastern Kingbird	1	-	-	-	-	-	x	-	x	2	3	-	-	1	x	-	2	-	3	x	2	-	-	-	-	-	1
Great Crested Flycatcher	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tree Swallow	-	-	-	-	-	-	x	-	-	35	x	-	-	-	x	x	3	-	3	x	-	-	-	-	-	-	-
Bank Swallow	-	-	-	-	-	-	-	-	-	9	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rough-winged Swallow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Barn Swallow	-	-	-	-	-	-	x	-	x	30	x	-	x	6	x	6	4	-	12	7	x	x	7	x	-	10	-
Purple Martin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Blue Jay	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common Crow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	x	-	-	-	-	-	-	-
Fish Crow	2	-	-	-	-	-	x	x	x	10	x	x	6	17	-	3	6	-	8	9	x	x	8	3	-	5	-
House Wren	2	-	-	-	-	-	x	-	-	2	2	-	-	-	x	6	3	-	1	1	x	1	2	-	3	3	-
Carolina Wren	3	-	-	-	-	-	-	-	-	1	1	-	-	2	3	2	2	-	-	-	1	1	-	-	-	-	-
Marsh Wren	-	-	-	-	-	-	x	x	x	8	-	-	8	3	x	10	30	2	-	1	-	-	4	-	3	3	-
Gray Catbird	-	-	-	-	-	-	x	-	-	3	2	-	2	2	x	3	2	-	3	4	x	1	4	-	2	2	-
European Starling	2	-	-	-	-	-	-	1	-	2	-	-	1	-	-	2	10	-	5	5	x	5	-	1	-	-	-
Red-eyed Vireo	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow Warbler	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pine Warbler	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common Yellowthroat	1	-	-	-	-	-	x	1	x	2	5	-	6	3	x	4	4	1	1	4	x	2	3	-	-	2	-
Bobolink	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern Meadowlark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	1	-	-	-	-	-	-	-	-	-	-
Red-winged Blackbird	-	-	-	-	x	-	x	x	x	x	-	3	7	x	x	3	-	-	7	5	x	x	3	x	-	3	-
Northern Oriole	-	-	-	-	-	-	-	-	-	1f	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boat-tailed Grackle	-	-	-	6	1	-	x	x	x	6	25	2	x	x	x	x	40	-	3	7	x	20	11	x	-	15	-
Northern Cardinal	3	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	x	1	-	-	-	-	-
Rose-breasted Grosbeak	-	-	-	-	-	-	-	-	-	1m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rufous-sided Towhee	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharp-tailed Sparrow	-	-	-	-	-	-	-	-	-	2	-	-	-	x	1	-	-	-	1	1	-	-	-	-	3	1	-
Seaside Sparrow	-	-	-	-	-	-	x	x	x	15	x	-	x	8	x	x	20	7	7	30	x	x	30	x	x	8	-
Song Sparrow	-	-	-	2	3	-	x	x	x	4	x	-	7	3	x	6	3	3	3	10	x	x	20	x	-	3	-
Total Species	18	10	8	6	13	7	27	23	29	44	35	17	25	26	32	27	43	15	39	53	42	34	35	20	15	42	-

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Table 21. Complete bird lists on selected dates: Holland, South Marsh, Little Deal, and Smith Islands

site number:	s.13	14	15	16	17	18	19	20	22	22	27	29	35	36	36	36	36	38	39	40	40	40	45	46	48	49	51
site:	Holland Island								SMI	L. Deal	CI	Wop	BL	Swan I.	FG	EH	Ewell-town	Gull	RH	P	I	HN					
month:	5	5	5	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6
day:	27	27	27	2	2	2	2	2	5	6	30	29	31	28	29	31	1	30	1	28	30	31	28	31	29	30	1
year:	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Common Loon	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Double-crested Cormorant	1	4	9	-	-	-	-	7	-	21	-	69	-	19	-	3	-	-	-	x	305	-	27	-	-	-	-
Great Blue Heron	x	-	-	x	x	-	x	x	1	-	x	3	x	1	1	1	3	-	-	-	-	-	-	-	x	x	11+
Green Heron	x	-	-	x	x	-	x	x	-	-	x	x	1	-	3	1	-	x	x	x	x	x	-	-	x	x	x
Little Blue Heron	x	-	-	x	-	-	x	-	-	-	x	3	1	7	2	2	2	x	-	x	-	-	-	7+	x	x	-
Cattle Egret	x	-	-	x	-	x	x	-	x	-	x	3	-	-	3	-	-	x	-	x	x	x	-	-	x	-	-
Great Egret	x	-	-	x	-	-	x	5	x	1	x	-	3	-	-	2	-	x	-	x	x	-	1	-	x	x	9+
Snowy Egret	x	-	-	x	-	-	x	5	x	-	x	2	4	6	-	7	4	x	3	x	-	-	1	x	x	x	-
Louisiana Heron	x	-	-	x	-	x	x	-	x	-	x	3	4	4	-	1	1	x	1	x	x	-	-	x	x	x	x
Black-crowned Night Heron	x	-	-	x	x	x	x	x	-	-	x	5	4	8	-	-	7160+	-	x	x	x	x	-	-	x	x	18+
Yellow-crowned Night Heron	x	-	-	x	x	-	x	-	x	-	x	17	17	-	2	-	-	x	x	x	x	x	-	14+	17+	14+	9+
Glossy Ibis	x	-	-	x	-	-	x	3	x	-	x	9	3	35	5	6	1	x	x	x	x	-	1	9	x	-	1
Mallard	-	-	-	-	-	-	-	-	-	-	1m	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-
American Black Duck	-	-	-	-	3	-	-	11	-	-	2	-	6	5	-	3	12	-	-	-	-	2	-	-	-	-	-
Gadwall	-	-	-	-	-	-	-	1	-	-	-	3	1f	3	-	1f	3	2	-	-	-	-	-	-	-	-	-
White-winged Scoter	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
Turkey Vulture	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Marsh Hawk	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1m	-	-	-	-	-	-	-
Osprey	2	-	-	4	-	-	-	x	-	1	7	6	3	-	-	2	3	-	-	x	x	-	2	2	1	-	2
Clapper Rail	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	1	-	-	-	x	x	3	-	1	-	1	-
American Oystercatcher	-	2	2	-	2	-	-	3	-	-	3	-	-	4	6	6	2	1	x	-	-	9	-	-	-	-	-
Semipalmated Plover	-	-	2	-	-	-	1	-	-	-	4	-	-	2	1	1	-	-	-	-	-	-	-	-	-	-	-
Black-bellied Plover	-	-	1	-	-	-	-	-	-	-	5	27	1	6	1	1	1	-	-	x	-	-	-	-	-	-	-
Ruddy Turnstone	1	-	6	-	-	-	-	2	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spotted Sandpiper	3	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4	-	-	x	-	-	-	-	-	-
Willet	2	-	2	2	2	-	3	9	-	4	4	4	4	8	7	7	7	6	1	x	x	-	5	4	-	3	1
Greater Yellowlegs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Red Knot	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Least Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dunlin	-	-	40	-	-	-	-	-	-	-	3	4	-	20	-	1	1	-	-	-	-	-	-	-	-	-	-
Short-billed Dowitcher	1	-	20	-	-	-	-	-	-	-	16	3	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-
Semipalmated Sandpiper	7	4	180	27	-	-	27	50	-	-	1	45	4	40	62	53	53	45	-	x	-	-	35	-	-	-	-
Greater Black-backed Gull	-	2	-	-	-	-	-	-	x	4	3	-	-	2	5	2	5	-	2	x	x	-	x	1	-	-	-
Herring Gull	3	x	x	-	7	-	-	170	x	12	10	9	7	45	165	90	175	25	13	x	x	x	x	3	25	10	3
Ring-billed Gull	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Laughing Gull	2	3	-	-	-	1	-	6	x	-	-	9	8	4	1	6	-	3	-	-	-	-	-	10	5	-	-
Forster's Tern	4	-	-	-	-	-	-	3	-	-	3	1	-	20	10	7	9	4	-	-	-	-	-	-	-	-	-
Common Tern	12	18	x	2	60	-	-	7	-	3	8	7	-	35	25	38	28	7	-	x	x	-	-	-	-	-	-
Little Tern	-	-	-	-	1	-	-	-	-	-	1	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-
Royal Tern	-	-	-	-	-	1	-	-	3	-	3	-	-	1	-	11	1	-	-	1	-	-	-	-	-	-	-
Black Skimmer	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	9	1	-	-	-	-	-	-	-	-	-	-
Mourning Dove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-

site number:	s.13	14	15	16	17	18	19	20	22	22	31-	27	29	35	36	36	36	36	38	39	40	40	40	41-	46	48	49	51
site:	Holland Island								SMI	L. Deal I.	CI	Wop	BL	Swan I.				FG	EH	Ewell-town Gull				RH	P	I	HN	
month:	5	5	5	6	6	6	6	6	6	6	5	5	5	5	5	5	6	5	6	5	5	5	5	5	5	5	5	6
day:	27	27	27	2	2	2	2	2	5	6	30	29	31	28	29	31	1	30	1	28	30	31	28	31	29	30	1	1
year:	78	78	78	78	78	78	78	78	78	71	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Yellow-billed Cuckoo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Chimney Swift	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	x	x	-	-	-	-	-	-
Common Flicker	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-
Eastern Kingbird	1	-	-	1	-	1	-	-	-	1	2	4	-	-	-	-	-	-	-	x	x	-	c	-	2	-	-	2
Great Crested Flycatcher	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Eastern Wood Pewee	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bank Swallow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Barn Swallow	10	-	-	-	6	-	-	17	-	3	9	6	-	6	8	3	4	6	6	x	x	x	2	-	6	5	5	-
Purple Martin	-	-	-	-	-	-	-	-	-	1	-	-	-	-	5	3	1	-	5	x	x	x	-	-	3	-	3	-
Blue Jay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	6	x	-	-	-	-	-	-	-
Common Crow	-	-	-	-	1	-	-	-	x	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fish Crow	9	-	-	-	6	-	8	2	x	-	8	7	8	5	3	-	-	41	21	x	x	45	1	2	20	7	4	-
House Wren	5	-	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	1	x	-	-	3	1	-	-
Carolina Wren	1	-	-	1	-	-	1	-	x	-	1	-	1	-	-	-	-	1	-	1	1	1	-	-	1	-	-	-
Marsh Wren	-	-	-	-	-	-	-	3	x	-	3	1	7	-	-	-	-	3	-	2	-	-	6	2	3	2	2	-
Gray Catbird	3	-	-	-	1	-	1	1	x	2	-	2	2	-	-	-	-	1	1	x	x	x	1	-	-	-	1	-
Brown Thrasher	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	x	-	-	-	-	-	-	-
American Robin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
European Starling	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	1	-	1	-	-	-
White-eyed Vireo	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Red-eyed Vireo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Yellow Warbler	-	-	-	-	-	-	-	-	x	2	-	-	-	-	-	-	-	-	-	1	x	-	-	-	-	-	-	-
Blackpoll Warbler	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Common Yellowthroat	-	-	-	-	1	-	1	2	-	2	3	2	6	-	-	-	-	3	1	x	x	x	2	2	2	2	-	2
American Redstart	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	2	-	-	-	-	1	-
House Sparrow	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	x	x	x	-	-	-	-	-	-
Bobolink	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-
Red-winged Blackbird	4	-	-	3	4	-	2	5	x	2	3	-	4	2	1	3	5	-	-	x	x	x	9	-	-	-	-	-
Orchard Oriole	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Boat-tailed Grackle	6	-	-	4	-	5	3	11	x	6	4	5	8	10	-	3	7	10	15	x	x	x	4	5	10	5	4	-
Common Grackle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	x	x	-	-	-	-	-	-
Brown-headed Cowbird	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	x	x	-	-	-	-	-	-
Northern Cardinal	-	-	-	1	-	-	-	-	x	1	1	1	-	-	-	-	-	-	-	1	1	1	-	-	1	-	-	-
Blue Grosbeak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Indigo Bunting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
American Goldfinch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1m	-	-	-	-	-	-
Red Crossbill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-
Savannah Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Sharp-tailed Sparrow	-	-	-	-	-	-	-	2	-	-	3	-	5	-	-	-	-	4	-	-	-	-	1	-	-	-	-	-
Seaside Sparrow	1	-	-	-	-	6	2	20	x	4	10	5	22	-	-	1	1	8	-	x	x	x	21	7	4	6	4	-
Chipping Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Song Sparrow	5	-	-	1	3	-	1	5	x	5	4	2	7	-	-	1	2	4	3	x	x	x	3	2	1	1	1	-
Total Species	32	7	11	20	18	9	22	30	28	23	42	33	29	29	22	32	29	30	19	54	40	28	22	18	27	19	22	-

September 1978

MARYLAND BIRDLIFE

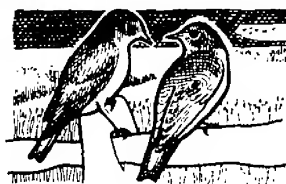
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Appendix I. List of plants referred to in the text

	Pinaceae
Loblolly pine	<i>Pinus taeda</i>
Japanese black pine	<i>Pinus thunbergii</i>
Red cedar	<i>Juniperus virginiana</i>
	Typhaceae
Cattail (sp)	<i>Typha</i> (sp)
	Gramineae
Reed grass	<i>Phragmites australis</i>
Big cordgrass	<i>Spartina cynosuroides</i>
Saltmarsh cordgrass	<i>Spartina alterniflora</i>
Saltmeadow hay	<i>Spartina patens</i>
Switch-grass	<i>Panicum virgatum</i>
	Juncaceae
Black needlerush	<i>Juncus roemerianus</i>
	Liliaceae
Asparagus	<i>Asparagus officinalis</i>
Greenbrier (sp)	<i>Smilax</i> (sp)
	Salicaceae
White poplar	<i>Populus alba</i>
	Myricaceae
Wax myrtle	<i>Myrica cerifera</i>
	Ulmaceae
American hackberry	<i>Celtis occidentalis</i>
	Moraceae
Red mulberry	<i>Morus rubra</i>
Common fig	<i>Ficus carica</i>
	Phytolaccaceae
Pokeweed	<i>Phytolacca americana</i>
	Hamamelidaceae
Sweetgum	<i>Liquidambar styraciflua</i>
	Rosaceae
Domestic pear	<i>Pyrus communis</i>
Rose (sp)	<i>Rosa</i> (sp)
Black cherry	<i>Prunus serotina</i>
	Leguminosae
Black locust	<i>Robinia pseudo-acacia</i>
	Anacardiaceae
Winged sumac	<i>Rhus copallina</i>
Poison-ivy	<i>Rhus radicans</i>
	Aquifoliaceae
American Holly	<i>Ilex opaca</i>
	Vitaceae
Grape vine (sp)	<i>Vitis</i> (sp)
	Malvaceae
Rose mallow	<i>Hibiscus moscheutos</i>
	Ebenaceae
Persimmon	<i>Diospyros virginiana</i>
	Convolvulaceae
Morning-glory (sp)	<i>Ipomoea</i> (sp)
	Bignoniaceae
Trumpet creeper	<i>Campsis radicans</i>
	Caprifoliaceae
Honeysuckle (sp)	<i>Lonicera</i> (sp)
	Compositae
Groundsel-tree	<i>Baccharis halimifolia</i>
Marsh elder	<i>Iva frutescens</i>



THE SEASON

SPRING MIGRATION, MARCH 1 - MAY 31, 1978

Robert F. Ringler

The spring of 1978 can best be characterized as cold and wet. Temperatures averaged 2 to 4 degrees below normal for the entire period. Most of the State was treated to a moderate snowstorm on Mar. 16, while western Maryland received its last measurable snowfall on Apr. 22. Precipitation during March was slightly above normal, and April's was slightly below, but May produced rainfall that was 1.5 to 4 inches above normal with major storm systems on May 4-6, 8-9, and 13-16 before drying out later in the month. As a consequence of this weather pattern the passage of migrant land birds was noted as being exceedingly late until the second half of May. By comparing certain May count totals from this year with those from 1977 one can ascertain more readily the degrees of lateness. Despite being one day earlier, the 1978 May count totals should be comparable. Here are the figures from Garrett County, which showed the most marked effect.

	<u>May 7, 1977</u>	<u>May 6, 1978</u>
Migrants & Breeding Birds:		
Eastern Kingbird	17	2
House Wren	66	16
Gray Catbird	136	3
Wood Thrush	120	6
Red-eyed Vireo	57	7
Black-and-white Warbler	29	3
Nashville Warbler	32	1
Yellow-rumped Warbler	114	2
Black-throated Green Warbler	60	2
Prairie Warbler	58	2
Ovenbird	55	4
Common Yellowthroat	309	2
Northern Oriole	76	3
Scarlet Tanager	39	4
Indigo Bunting	81	1
Wintering Birds:		
Brown Creeper	2	5
Evening Grosbeak	10	554
Purple Finch	24	55
Common Redpoll	0	2
Pine Siskin	0	4
Northern Junco	0	28
White-throated Sparrow	59	164
Fox Sparrow	3	9

The decreases observed from 1977 to 1978 cannot be accounted for by lack of coverage or bad weather on count day because the more northern species showed corresponding increases, promising some very late departure records.

Contributors:

Garrett - Fran Pope, Sallie Thayer
Allegany, Washington - Jim Paulus, Robert & Mary Keedy, John Willetts
Frederick - Charles L. Mullican, David L. Hansroth, John D. Helm,
Carolyn Maize, Anne Cherrington, William N. Shirey, Elise Thrasher
Carroll - Geraldine Newton, Spike Morningstar, Rick Blom
Baltimore - Rick Blom, Jim Stasz, Mike Resch, Peggy Bohanan, Charles
Swift, Bob Ringler, Warren Bielenberg
Harford, Cecil - Chuck Graham, John Wortman, Joe Schreiber
Howard - Jo Solem, David Holmes, Steve Simon, Mark D. Wallace
Montgomery - Robert W. Warfield, John Weske, Margaret Donnalld
Prince Georges - Chan Robbins, Danny Bystrak, Sam Droege, Paul Nistico
Anne Arundel - Hal Wierenga, Danny Bystrak
Charles - Paul Nistico
Calvert, St. Marys - John H. Fales
Kent, Queen Annes - Floyd L. Parks, Jimmy Gruber, Pat Wilson
Caroline - Mr. & Mrs. A. J. Fletcher, Ethel Engle, M. W. Hewitt,
M. Nuttle, A. Knotts, E. Bishop
Talbot - Jan Reese, Henry Armistead
Dorchester - Henry T. Armistead
Lower Eastern Shore - Charles Vaughn, Henry Armistead, Rich Rowlett,
Paul G. DuMont

To avoid repetition of names from certain locations I will note here that all Garrett County reports are credited to Fran Pope, Sandy Pt. and Annapolis to Hal Wierenga, Black Marsh to Rick Blom, pelagic trips and southeastern Worcester County to Rich Rowlett, southern Dorchester County and the islands in lower Chesapeake Bay to Henry Armistead, and Back River to Jim Stasz.

Loons, Grebes, Pelagics. High counts of Common Loons were 774 over Sandy Point on Apr. 13 and 222 off Ocean City on May 7. Red-throated Loons on spring pelagic trips included 17 on Apr. 29 and one late bird on May 7. Red-necked Grebes peaked at 4 in Baltimore harbor, Mar. 7 (Blom). An impressive list of tubenoses was encountered off Ocean City on the boat trips. One Northern Fulmar was seen on Apr. 15, 47 on Apr. 29, 13 on May 6, and 13 on May 7. On the May 28 trip 2 Cory's (early), 47 Greater, and 188 Sooty Shearwaters were counted. Sooties also were counted on earlier trips with 9 on Apr. 29, 3 on May 6, and 1 on May 7. Four Leach's Storm Petrels were found scattered among the many Wilson's 70 miles ESE of Ocean City on May 7. Totals of Wilson's Storm Petrels were 40 on Apr. 29, 489 on May 6, 1,025 on May 7, and 1,830 on May 29. The high count of Northern Gannets for the season was 303 on Apr. 15 with one late bird on May 28.

Cormorants, Frigatebird, Tall Waders. Single sightings of Great Cormorants were recorded at Ocean City, Mar. 4 (DuMont), St. George I., Mar. 30 (Rowlett), and Ocean City again, Apr. 16 (DuMont). High counts

Table 1. Spring Arrival Dates, 1978

Species	Median 10-yr 1978	Garr	Al/W	Fred	Carr	Balt	Ha/C	Howa	Mont	PrGr	AnAr	Char	C/SM	K/QA	Caro	Talb	Dorc	LES
Common Loon	4/12 4/ 4	4/ 4	--	--	--	4/ 4	--	4/21 4/16	4/29 3/29	0	--	3/11 0	3/30 4/ 9	W				
Horned Grebe	3/15 4/ 4	4/ 4	4/ 7	0	4/ 8	2/19	--	4/ 3 3/ 5	0 2/23	0	4/ 7	4/13 0	W	W				
Pied-billed Grebe	3/18 3/27	3/21 4/ 4	--	--	--	3/13	--	4/16 2/25	-- 2/23	--	--	4/ 3	--	--	4/ 9	W		
Double-cr. Cormorant	4/14 4/10	0	0	0	0	2/25	--	0	--	0	4/10	5/ 6	5/ 6	5/ 6	--	--	4/ 9	3/18
Great Blue Heron	3/18 3/18	3/27	--	--	--	3/12	--	2/13 3/18	-- 3/21	--	3/13	--	--	--	--	--	3/18	3/18
Green Heron	4/19 4/17	4/25 4/24	4/17	--	--	4/11	--	4/20 4/29	4/13 4/12	--	--	--	4/18 4/10	4/20 4/16				
Little Blue Heron	4/27 4/20	0	0	5/ 6	0	4/ 1	0	0	5/14 4/13	0	5/ 6	0	0	4/20 4/16				
Cattle Egret	4/ 9 4/ 9	0	0	0	0	4/ 2	0	0	--	--	4/10	--	3/26 4/24	4/ 9 3/28				
Great Egret	4/14 4/ 9	4/ 9	0	4/21 4/15	--	0	0	4/ 9	0	4/20	--	--	0	3/29 4/ 9	3/24			
Snowy Egret	4/17 4/25	0	5/ 6	0	0	4/ 1	0	0	5/ 6 4/10	0	5/ 6	5/ 6	4/25 3/18	4/16				
American Bittern	4/18 4/24	5/ 6 5/ 1	4/25 0	4/ 7	0	0	5/ 5	4/21 4/15	0	4/24 0	0	4/15	--	4/15	--			
Glossy Ibis	4/15 4/ 9	0	0	4/ 8	0	3/28	0	0	0	4/ 1	0	--	0	4/ 9 4/25	4/ 9 4/16			
Whistling Swan	3/ 9 3/23	4/ 4 4/ 4	3/31	--	3/18	--	3/25 3/19	--	W	--	3/22	2/19	W	W	--	--		
Canada Goose	3/ 5 3/13	4/27	--	3/13	--	3/13	--	2/12 3/11	--	W	--	3/16	3/11	W	W	W	W	W
Common Pintail	3/ 3 3/23	4/ 5	0	0	4/ 8	3/13	0	0	0	2/25	0	0	3/ 5 4/ 3	0	0	0	0	0
Green-winged Teal	3/18 3/23	4/ 6	0	0	3/19	2/25	0	3/25 4/ 9	--	3/23	0	0	3/18 0	0	0	0	0	0
Blue-winged Teal	3/22 3/27	3/29 4/ 7	3/27 4/ 8	3/11	--	3/30 4/ 2	3/24 4/ 1	--	3/25	3/22	3/ 1	4/22 3/19	3/18					
American Wigeon	3/ 6 3/19	3/28	0	0	3/19	3/18	--	3/25 3/12	0	W	0	0	3/11 4/ 3	0	--	--		
Northern Shoveler	3/17 3/20	0	0	3/13 4/ 8	3/11	0	0	0	0	3/25	0	0	3/22 4/12	0	3/19	3/18		
Wood Duck	3/ 9 3/31	3/20 4/ 4	3/15	--	3/13	--	4/17 3/ 5	--	3/19	--	4/ 4	--	3/31 4/22	4/ 9	--	--		
Redhead	3/ 7 3/19	3/28	0	0	3/19	3/14	0	0	0	0	0	0	3/11 3/21	--	--	--		
Ring-necked Duck	3/ 4 3/19	3/24	0	3/20	0	2/25	0	3/25 3/12	0	3/19	0	0	3/11 3/15	0	0	3/19		
Canvasback	3/14 3/20	3/28	0	3/20	0	W	0	4/15	0	W	0	3/13	3/11 3/21	--	--	W		
Lesser Scaup	3/ 9 3/17	3/20 4/ 7	3/22	0	W	3/30	2/12	0	0	W	0	3/15	3/11 3/15	--	--	W		
Common Goldeneye	3/ 3 3/11	3/24 3/ 4	3/15	0	W	0	0	3/11	0	W	0	0	3/11 0	--	--	W		
Bufflehead	3/14 3/21	3/24 3/ 4	3/22 4/ 8	3/21	0	3/25	0	0	0	W	0	3/ 6	3/11 0	--	--	W		
Oldsquaw	3/18 3/22	4/ 5	--	0	4/15	--	--	0	0	0	3/22	0	4/13 0	--	--	W		
Ruddy Duck	3/13 3/19	4/ 5 4/ 7	0	0	W	--	0	0	0	3/25	0	3/ 5	3/11 3/15	--	3/19	W		
Hooded Merganser	3/ 8 3/17	3/17	--	3/13 3/12	3/ 7	0	3/25	0	--	3/19	0	0	3/18 0	0	0	0		
Common Merganser	3/ 7 3/ 4	5/ 6 3/ 4	2/ 8	0	W	--	0	0	0	2/17	0	0	3/11 0	0	0	0		
Red-br. Merganser	3/16 3/25	3/28	--	3/25	0	3/16	0	3/25	0	0	2/17	0	4/ 7	3/11 0	--	--	W	
Sharp-shinned Hawk	3/14 3/18	4/ 5	--	--	4/ 8	3/19	--	3/13 4/21	3/18 3/11	--	2/26 3/ 5	--	3/18 4/ 9	2/26				
Broad-winged Hawk	4/17 4/15	4/15	--	--	4/25	4/ 6	--	4/11 4/23	4/23 3/31	--	3/28	--	--	--	--	4/16		
Osprey	3/26 3/26	4/ 6	--	3/31	0	3/27	--	4/17 4/ 2	4/23 3/18	--	3/25	3/20 3/13	3/ 5	3/19 3/18				
Virginia Rail	4/24 4/25	0	0	4/26	0	4/25	--	0	0	5/ 6	--	--	--	--	--	4/14	W	
Sora	4/25 4/27	4/27 5/ 6	4/21 0	4/30	0	0	0	0	--	5/ 7	0	0	4/24 0	4/22 4/16	4/30			
Common Gallinule	5/ 4 5/ 6	0	5/ 6	0	0	5/ 6	0	0	0	5/ 6	0	0	5/ 6 5/10	0	5/14	--		
American Coot	3/16 4/ 2	4/ 8 4/ 7	4/ 5 3/19	2/13	--	3/29 2/20	--	--	W	--	4/11	3/24	--	--	4/ 9	W		
Semipalmated Plover	5/ 5 5/ 5	5/ 5	0	5/ 6	0	5/ 6	5/ 6	0	0	5/ 5	0	0	4/26 0	0	4/16	4/30		
Killdeer	2/27 3/12	3/12	--	2/24 3/19	3/14	--	3/13 3/11	--	3/19	--	3/12	3/11	--	--	--	W		
Black-bellied Plover	5/ 2 5/ 1	5/ 6	0	0	0	4/22	0	0	0	5/ 6 4/27	0	0	5/ 1 0	5/ 6 4/29	W			
Upland Sandpiper	-- 4/24	4/13	0	4/23	0	5/ 6	0	0	0	4/24	0	0	5/ 6 0	0	0	0		
Greater Yellowlegs	3/24 3/24	5/ 5	--	3/22	0	3/24	--	4/22	0	4/ 5 4/10	--	--	3/21 4/ 2	3/22 3/19	3/18			
Lesser Yellowlegs	4/19 4/15	5/ 2	4/16 3/22	4/15	3/12	--	0	--	5/ 5 3/11	--	--	3/21 4/27	--	4/ 9 4/16				
Solitary Sandpiper	4/30 4/17	4/18 4/ 1	4/23 4/15	3/15	5/ 6	4/14 4/ 8	4/29 4/19	0	0	4/20 4/17	5/ 6	5/ 3	4/16					
Willet	4/24 5/ 5	0	0	0	0	5/ 6	0	0	0	5/ 4	0	5/ 6	5/28 0	--	4/ 9 4/15			
Spotted Sandpiper	4/27 4/23	4/11 5/ 1	--	--	4/ 5	--	4/25 4/23	4/23 4/20	--	--	--	4/25 4/23	4/16 4/16	--	--			
Ruddy Turnstone	-- 5/10	5/10	0	0	0	0	0	0	0	5/ 4	0	0	0	5/10 5/27	W			
American Woodcock	2/28 3/15	2/19 3/18	3/12	--	3/13	--	3/12 3/18	--	3/15	--	4/ 4	--	--	4/22	--	W		
Common Snipe	3/10 3/19	3/15	--	--	3/19	3/12	--	2/19	--	--	3/14	--	4/ 6	4/ 3	--	4/10 3/24	W	

Species	Median 10-yr 1978			Garr	Al/W	Fred	Carr	Balt	Ha/C	Howa	Mont	PrGe	AnAr	Char	C/SM	K/QA	Caro	Talb	Dorc	LES
Short-b. Dowitcher	5/ 4	5/ 5	0	5/ 6	0	0	0	5/ 6	0	0	0	0	5/ 4	0	0	5/12	0	0	4/ 9	4/16
Semipalmated Sandpiper	5/ 4	5/ 6	5/ 5	0	4/26	0	0	4/29	5/ 6	5/ 6	5/ 6	5/ 6	5/ 4	0	5/ 6	4/26	5/ 6	5/ 6	5/ 3	5/ 6
Least Sandpiper	5/ 2	4/17	4/30	--	4/26	0	0	4/ 1	--	--	--	--	4/11	0	0	4/18	4/17	--	4/ 9	--
White-rump. Sandpiper	--	5/ 6	0	5/ 6	0	0	0	5/ 6	0	0	0	0	5/ 5	0	0	5/ 6	0	0	5/ 6	5/ 6
Pectoral Sandpiper	4/14	4/ 4	4/30	5/ 2	4/ 7	0	0	4/ 1	--	0	0	0	3/26	0	0	3/20	4/17	0	3/24	--
Dunlin	5/ 1	4/ 9	5/ 4	0	0	0	0	5/ 7	0	0	0	0	3/26	0	0	3/24	0	4/24	3/19	W
Laughing Gull	4/12	4/ 5	0	0	0	0	0	3/23	--	0	0	0	4/ 9	--	4/ 5	--	4/ 2	4/10	4/ 9	3/25
Bonaparte's Gull	3/31	4/ 6	4/ 6	4/ 7	0	0	0	2/19	--	0	4/ 9	0	3/25	0	--	--	0	--	--	W
Forster's Tern	4/24	4/24	4/24	5/ 6	0	0	0	4/ 6	5/ 6	0	5/ 6	0	4/23	0	0	0	0	--	--	4/16
Common Tern	5/ 3	5/ 6	0	0	5/ 6	0	0	5/ 6	0	0	5/ 7	0	4/ 1	0	5/ 6	5/ 6	0	4/23	4/ 9	4/29
Little Tern	5/ 4	5/ 6	0	0	0	0	0	5/ 6	0	0	0	0	5/ 9	0	5/ 6	5/ 6	0	0	5/ 3	4/29
Caspian Tern	4/29	4/16	0	5/ 6	0	0	0	4/ 1	0	0	0	0	4/ 8	0	4/17	0	0	4/29	--	4/16
Black Tern	5/ 4	5/13	0	5/ 6	0	0	0	6/ 6	0	0	0	0	5/20	0	0	0	0	0	0	4/16
Yellow-billed Cuckoo	5/ 6	5/ 6	--	5/ 6	5/ 6	--	--	5/ 6	5/ 6	5/ 3	5/ 6	5/ 9	5/ 6	5/ 6	--	5/ 6	5/ 4	5/ 6	5/ 3	5/ 6
Black-billed Cuckoo	5/ 5	5/ 6	--	--	5/21	0	0	5/ 6	0	5/ 6	5/ 6	5/ 3	5/ 6	0	0	5/ 6	0	0	0	0
Chuck-will's-widow	5/ 3	5/ 4	0	0	0	0	0	5/11	0	0	0	0	5/11	0	5/ 6	5/ 6	4/25	4/25	5/ 3	4/25
Whip-poor-will	4/25	5/ 1	--	5/ 3	4/21	--	--	4/26	--	5/ 6	5/ 6	5/ 6	5/ 3	--	4/15	5/ 6	4/30	--	4/ 9	4/25
Common Nighthawk	5/ 7	5/ 6	5/25	5/ 6	--	--	--	5/10	--	5/18	5/ 6	5/19	4/28	5/ 6	--	5/ 6	5/ 1	4/28	5/12	4/29
Chimney Swift	4/17	4/15	4/28	4/17	4/21	4/15	--	4/13	--	4/15	4/ 9	4/11	4/ 1	--	4/27	4/28	4/19	4/10	4/ 9	4/16
Ruby-thr. Hummingbird	4/30	5/ 3	5/10	5/ 6	5/ 6	--	--	4/30	--	5/ 6	5/ 5	4/26	5/ 2	5/ 6	4/25	5/ 6	4/29	4/30	5/ 3	4/16
Belted Kingfisher	3/15	3/24	3/19	--	--	--	--	3/19	--	3/30	3/11	--	4/ 5	--	3/30	--	--	--	--	--
Common Flicker	3/18	3/22	3/28	--	--	--	--	3/21	--	3/22	--	4/ 1	--	--	3/19	--	--	--	--	--
Eastern Kingbird	4/28	4/29	4/29	5/ 6	4/26	--	--	4/24	5/ 6	4/30	4/25	4/24	4/23	5/ 6	5/ 6	5/ 6	4/29	4/27	4/25	5/ 6
Great Cr. Flycatcher	5/ 1	5/ 6	5/11	5/ 6	4/26	--	--	4/30	5/ 6	5/ 6	5/ 6	5/ 6	4/30	5/ 6	5/ 6	5/ 6	5/ 5	5/ 6	4/25	4/29
Eastern Phoebe	3/18	3/20	3/16	--	3/18	--	--	3/16	--	3/30	3/18	3/21	3/21	--	3/31	--	3/20	--	--	--
Acadian Flycatcher	5/ 4	5/ 6	5/21	5/ 6	--	--	--	5/ 3	--	5/ 6	5/ 6	5/ 6	5/ 6	--	5/ 6	--	5/ 6	--	5/13	4/29
Willow Flycatcher	5/20	5/20	5/20	0	0	5/25	--	5/26	0	0	5/13	5/ 6	5/ 8	0	0	5/23	0	0	0	0
Least Flycatcher	5/ 6	5/ 6	5/ 6	5/ 6	0	0	0	5/ 7	0	5/10	5/ 3	5/ 9	5/ 6	0	0	5/ 6	0	0	0	0
Eastern Pewee	5/ 4	5/ 6	5/ 6	5/ 6	5/ 6	--	--	5/ 2	--	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	--	5/13	5/ 6
Tree Swallow	3/29	3/27	4/ 2	4/ 5	3/15	4/ 8	--	3/15	--	3/30	4/ 2	3/22	3/23	--	3/19	3/24	4/ 8	4/ 6	3/24	--
Bank Swallow	5/ 1	4/25	4/30	5/ 6	4/25	0	--	4/25	--	4/10	5/ 6	4/21	4/13	5/ 6	4/ 5	4/20	4/18	4/30	4/29	4/16
Rough-winged Swallow	4/17	4/12	4/29	--	3/29	4/14	--	4/ 1	--	4/15	--	4/21	4/11	--	--	--	3/28	4/30	4/ 9	--
Barn Swallow	4/ 7	4/ 7	4/18	4/16	4/ 4	4/ 8	--	3/23	--	3/30	4/ 2	4/ 2	3/31	4/16	4/11	--	0	4/ 6	4/ 9	4/16
Cliff Swallow	5/ 3	4/24	4/24	5/ 3	4/21	--	--	4/ 8	--	5/ 6	5/11	4/23	4/15	0	0	5/ 3	0	0	4/25	0
Purple Martin	4/ 4	4/ 7	5/ 6	4/24	4/ 7	--	--	4/ 7	--	3/30	--	4/13	4/ 8	--	4/ 4	--	3/21	4/ 6	4/16	4/11
House Wren	4/21	4/23	4/28	4/14	4/17	4/25	--	4/23	--	4/28	4/21	4/23	4/24	--	4/24	5/ 6	4/16	4/30	4/29	4/16
Marsh Wren	5/ 3	5/ 6	0	0	0	0	0	4/24	5/ 6	5/ 6	0	5/ 6	5/ 5	--	--	5/ 6	--	5/ 6	4/16	W
Gray Catbird	4/25	4/28	4/30	--	4/28	--	--	4/11	5/ 4	5/ 5	4/28	4/15	4/30	--	4/28	--	4/10	4/28	4/16	--
Brown Thrasher	4/ 8	4/ 8	4/11	4/28	4/ 4	--	--	3/24	--	4/ 6	4/15	4/17	4/ 8	--	4/ 2	--	4/ 7	--	4/ 9	4/16
American Robin	2/22	3/ 8	3/ 5	3/11	3/13	3/19	--	2/20	--	3/ 6	2/13	3/12	--	--	--	--	3/31	--	--	--
Wood Thrush	4/23	4/28	5/ 6	5/ 6	5/ 6	--	--	4/11	5/ 4	5/ 2	4/28	4/29	4/25	--	4/27	--	4/20	--	4/20	4/16
Swainson's Thrush	5/ 6	5/ 6	5/ 9	5/12	--	--	--	5/ 3	--	5/ 3	5/ 6	5/ 6	5/ 6	--	5/ 9	5/ 6	5/17	--	5/ 6	--
Gray-cheeked Thrush	5/ 8	5/ 7	0	5/12	5/ 6	0	0	5/ 7	0	5/ 4	5/ 5	5/ 6	5/24	0	5/22	5/12	0	0	0	0
Veery	5/ 3	5/ 6	5/ 6	5/ 6	5/ 6	--	--	4/24	5/ 6	5/ 6	5/ 4	5/ 3	5/ 5	5/ 6	--	5/ 6	5/ 6	5/ 6	--	--
Blue-gray Gnatcatcher	4/12	4/11	4/11	--	4/10	4/15	--	4/ 9	--	4/13	4/ 8	4/10	4/ 8	4/16	4/12	--	4/11	4/28	4/20	4/16
Golden-cr. Kinglet	3/25	3/24	4/ 6	--	3/30	--	--	3/24	--	--	--	--	3/11	--	2/ 8	--	--	--	--	--
Ruby-crowned Kinglet	4/10	4/ 8	4/ 8	--	4/ 6	--	--	4/ 4	--	4/ 4	4/17	4/ 4	4/16	--	--	4/10	--	--	4/25	--
Water Pipit	3/24	3/11	4/ 8	2/ 4	3/22	--	--	3/11	--	--	--	--	2/25	--	2/14	3/26	--	--	--	--
Loggerhead Shrike	--	3/24	0	3/11	4/26	0	0	3/29	0	0	0	0	0	0	0	2/12	0	0	3/24	0
White-eyed Vireo	4/24	4/29	5/ 9	5/ 6	5/ 6	4/25	--	4/18	5/ 6	4/29	4/25	5/ 6	4/23	5/ 6	4/24	5/ 6	4/13	5/ 6	4/25	4/16

Species	Median 10-yr 1978		Garr	AI/W	Fred	Carr	Balt	Ha/C	Howa	Mont	PrGe	AnAr	Char	C/SM	K/QA	Caro	Talb	Dorc	LES
Yellow-thr. Vireo	4/30	5/ 6	--	5/ 6	--	--	5/ 2	--	5/ 6	5/ 6	5/ 6	4/25	5/ 6	5/ 6	5/ 6	5/ 5	5/ 6	--	4/29
Solitary Vireo	4/26	4/29	4/29	5/ 6	4/25	--	4/16	--	5/ 3	4/27	5/ 6	4/25	0	4/20	4/29	5/ 3	0	0	0
Red-eyed Vireo	4/30	5/ 5	5/ 6	5/ 6	--	--	4/23	5/ 6	5/ 5	5/ 6	4/24	5/ 6	5/ 6	5/ 3	5/ 6	4/24	5/ 6	4/25	4/25
Warbling Vireo	5/ 2	5/ 6	0	5/ 6	5/27	0	5/ 4	--	0	4/23	0	5/ 2	0	0	5/ 6	5/ 6	0	0	0
Black-&-white Warbler	4/22	4/25	4/29	--	4/25	--	4/13	5/ 4	4/30	4/27	--	4/23	4/16	--	4/25	4/18	--	4/25	4/16
Prothonotary Warbler	4/25	4/24	0	0	--	0	--	--	--	4/30	4/24	4/11	--	--	--	4/23	--	4/25	4/25
Worm-eating Warbler	5/ 2	5/ 6	--	5/ 6	5/ 6	--	5/ 6	5/ 6	5/ 6	5/ 6	5/ 7	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	4/29	4/16
Golden-wing. Warbler	5/ 3	5/ 6	5/11	5/ 6	4/26	0	5/ 6	0	5/ 6	5/ 5	5/ 6	5/ 6	0	0	4/28	0	0	0	5/ 8
Blue-winged Warbler	5/ 3	5/ 5	--	5/ 6	5/ 5	--	4/30	5/ 6	5/ 6	5/ 5	5/ 4	5/ 3	5/ 6	0	4/28	4/30	5/ 6	0	4/29
Tennessee Warbler	5/ 5	5/ 6	5/22	5/ 6	4/26	0	5/ 6	0	5/ 6	5/ 6	5/21	5/10	0	0	5/ 1	0	5/ 6	0	0
Nashville Warbler	5/ 2	5/ 6	5/ 6	5/ 6	0	0	5/ 6	0	0	5/ 6	5/ 6	5/ 6	0	0	4/28	5/11	0	0	0
No. Parula Warbler	4/25	4/24	5/ 6	5/ 6	--	--	4/18	5/ 6	4/25	4/16	4/18	4/18	4/17	4/24	5/ 1	5/ 1	--	5/ 3	4/16
Yellow Warbler	4/26	4/27	4/25	5/ 2	5/ 6	--	4/24	5/ 6	4/23	5/ 6	4/24	4/24	--	--	4/24	5/ 5	5/ 4	4/25	4/30
Magnolia Warbler	5/ 5	5/ 6	5/ 9	5/ 6	5/ 6	0	5/ 4	0	5/ 6	5/ 5	5/ 9	5/ 6	0	5/ 9	5/ 2	5/11	5/ 6	0	5/ 6
Cape May Warbler	5/ 4	5/ 6	5/ 7	5/ 6	0	0	4/23	5/ 6	5/10	5/ 5	5/ 6	5/ 6	0	0	5/ 6	5/ 6	0	0	0
Black-thr. Blue Warb.	5/ 3	5/ 5	5/ 6	5/ 6	5/ 5	0	4/30	0	5/ 6	5/ 5	5/ 3	4/30	5/ 6	0	5/ 3	5/ 2	5/ 6	5/13	5/ 6
Yellow-rumped Warbler	4/15	4/12	4/23	--	4/ 3	4/15	4/ 5	--	4/13	--	4/ 6	--	4/16	4/12	4/10	W	W	W	W
Black-thr. Green Warb.	4/14	5/ 6	4/19	5/ 6	5/ 6	0	4/30	0	5/ 6	5/ 5	5/ 4	5/ 6	0	5/ 9	5/ 6	0	5/ 6	0	0
Cerulean Warbler	5/ 3	5/ 6	5/ 5	5/ 6	4/26	0	4/25	0	5/ 6	5/ 6	5/ 6	5/10	5/ 6	0	0	0	0	0	0
Blackburnian Warbler	5/ 4	5/ 6	5/ 6	5/ 6	--	--	5/ 4	5/ 6	5/ 6	5/ 6	5/ 2	5/ 6	5/ 6	0	5/10	5/10	0	0	5/ 8
Yellow-thr. Warbler	4/17	4/14	0	--	4/26	--	4/13	4/14	4/28	4/ 2	0	0	--	0	--	--	0	4/16	4/ 1
Chestnut-sided Warb.	5/ 4	5/ 6	5/ 7	5/ 6	0	0	5/ 4	5/ 6	5/ 6	5/ 6	5/ 5	4/30	0	0	4/25	5/10	0	0	5/ 8
Bay-breasted Warbler	5/ 7	5/ 6	5/ 9	5/ 6	0	0	5/ 4	0	0	5/19	0	5/ 6	5/ 6	0	5/10	0	0	0	0
Blackpoll Warbler	5/ 5	5/ 8	0	5/ 6	--	0	5/10	0	5/13	5/ 6	5/ 2	5/ 6	5/ 6	--	4/25	5/10	5/ 6	5/13	5/14
Pine Warbler	3/18	3/27	--	4/ 1	4/26	4/15	3/22	--	4/22	4/ 2	4/ 6	3/23	--	3/23	--	3/23	3/ 3	3/19	W
Prairie Warbler	4/25	4/29	4/19	5/ 6	--	--	4/23	5/ 6	4/29	4/22	4/29	4/30	5/ 6	5/ 6	5/ 6	4/28	4/24	4/25	4/16
Palm Warbler	4/14	4/15	4/27	--	0	0	4/15	0	4/23	4/ 8	4/ 2	4/14	0	0	4/24	4/ 8	4/14	0	4/15
Ovenbird	4/25	5/ 4	5/ 5	5/ 6	5/ 6	--	4/23	5/ 4	5/ 6	4/25	5/ 4	4/25	5/ 6	5/ 6	5/ 6	4/18	5/ 6	4/20	4/16
Northern Waterthrush	5/ 1	5/ 6	5/ 6	5/ 1	4/25	0	5/ 2	5/ 6	5/ 6	4/25	5/ 6	5/ 6	--	0	4/29	5/ 7	5/ 6	0	5/ 6
Louisiana Waterthrush	4/ 9	4/ 8	4/29	--	3/30	--	4/ 4	--	4/22	4/ 8	--	4/ 5	--	4/21	--	4/10	--	--	4/ 1
Kentucky Warbler	5/ 3	5/ 6	5/18	5/ 6	5/ 6	--	4/30	5/ 6	5/ 6	5/ 5	5/ 6	5/ 6	5/ 6	4/20	5/ 6	5/ 6	5/ 6	5/13	4/16
Mourning Warbler	5/21	5/15	0	5/12	0	0	5/11	0	0	5/15	5/22	5/24	0	0	0	0	0	0	0
Common Yellowthroat	4/21	4/24	5/ 6	5/ 6	4/28	--	4/11	5/ 6	4/15	4/24	4/19	4/13	--	4/28	--	4/11	4/25	4/14	4/25
Yellow-breasted Chat	5/ 3	5/ 6	5/ 6	5/ 6	--	--	5/ 6	--	5/ 3	5/ 4	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	5/ 2	--	4/16	5/ 7
Hooded Warbler	5/ 1	5/ 4	5/ 7	5/ 6	--	--	4/23	--	5/ 6	4/24	5/ 6	4/25	5/ 6	5/ 3	--	--	--	--	4/25
Wilson's Warbler	5/ 7	5/10	0	0	--	0	5/ 6	0	5/13	5/11	5/ 9	5/ 7	0	--	5/18	0	0	0	0
Canada Warbler	5/ 7	5/ 6	5/ 9	5/ 6	5/11	--	4/30	5/13	5/ 6	5/ 4	5/ 6	5/ 6	0	--	5/ 6	5/19	5/ 6	5/13	0
American Redstart	5/ 1	5/ 3	5/ 3	5/ 6	4/26	--	4/25	5/ 6	5/ 3	4/30	5/ 6	4/25	5/ 6	5/ 6	4/19	5/ 1	5/ 6	--	4/25
Bobolink	5/ 4	5/ 6	4/27	5/ 6	4/26	--	4/30	5/ 6	5/ 6	5/ 5	5/ 6	4/30	5/ 6	4/30	5/ 6	5/ 6	5/ 6	5/ 3	5/ 6
Orchard Oriole	5/ 1	5/ 6	--	5/ 6	5/ 6	--	4/24	5/ 6	5/ 6	5/ 5	5/ 6	4/24	5/ 6	5/ 6	5/ 6	5/ 6	4/25	4/25	5/ 6
Northern Oriole	4/30	5/ 3	5/ 1	5/ 3	5/ 2	--	4/23	--	5/ 3	5/ 5	5/ 4	5/ 6	5/ 6	5/12	4/22	4/30	--	5/ 6	5/ 6
Scarlet Tanager	5/ 1	5/ 6	5/ 4	5/ 6	5/ 6	5/14	4/28	5/ 6	5/ 6	5/ 5	5/ 6	4/29	5/ 6	5/ 6	5/ 6	4/29	5/ 6	4/25	4/29
Summer Tanager	5/ 4	5/ 6	0	0	--	0	4/30	0	0	0	5/ 6	5/ 6	0	5/11	0	4/24	0	4/29	5/ 6
Rose-br. Grosbeak	5/ 3	5/ 6	5/ 5	5/ 6	5/ 6	--	5/ 1	5/ 6	5/ 4	5/ 6	5/ 6	4/30	5/ 6	--	5/ 6	5/ 3	5/ 6	--	4/30
Blue Grosbeak	5/ 4	5/ 6	0	--	5/27	--	5/ 8	0	--	5/12	5/ 6	0	0	5/ 6	5/ 6	5/ 6	5/ 1	5/ 6	5/ 6
Indigo Bunting	5/ 2	5/ 6	5/ 6	5/ 6	5/ 6	--	4/30	--	5/ 5	5/ 6	5/ 6	4/23	5/ 6	5/ 9	5/ 6	5/ 6	5/ 6	5/13	4/16
Savannah Sparrow	3/22	3/25	4/13	4/ 7	3/22	0	3/18	0	3/ 5	3/25	4/ 4	3/25	--	--	3/ 5	--	3/ 5	--	--
Grasshopper Sparrow	5/ 3	5/ 6	--	5/ 6	4/23	--	5/ 6	5/ 6	5/ 6	5/ 3	5/ 6	5/10	5/ 6	4/30	5/ 6	5/ 6	5/ 6	4/25	5/ 6
Vesper Sparrow	4/ 6	4/ 6	4/ 6	--	4/26	--	5/ 3	--	--	--	--	--	--	4/ 5	3/ 9	3/28	--	--	4/16
Chipping Sparrow	4/ 4	4/ 6	--	3/26	--	--	4/ 4	4/ 8	3/30	4/19	4/ 2	4/ 1	--	4/ 8	---	--	3/30	4/ 9	--
Lincoln's Sparrow	--	5/11	5/26	5/ 6	0	0	5/11	0	5/11	5/ 3	0	5/24	0	0	0	0	0	0	0

of Double-crested Cormorants for late spring were 400 on a heron bar east of St. Clements I., St Marys County, May 6 (Ray Taylor) and 340 at Smith I., May 29. A closely observed adult male Magnificent Frigatebird was seen flying over Assawoman Bay near St. Martins Neck, Worcester Co., May 12 (Eddie Slaughter). This is only the fourth state record. Unusual in upper Chesapeake Bay in spring are adult Little Blue Herons, but 4 were migrating past Black Marsh, Apr. 1 and single birds were there on Apr. 29 and May 6. Four singles were seen at Sandy Pt. from Apr. 13 to May 20 and another was flying with a Great Egret over Fort McHenry in Baltimore, May 8. Also unusual in the northern Bay were a Louisiana Heron at Black Marsh, May 6, and another at Sandy Pt., May 24. Interesting inland reports of Great Egrets were one at Broadford Reservoir, Garrett Co., Apr. 9, sitting in a tree with a Great Blue Heron, and one at Piney Run Reservoir, Carroll Co., Apr. 15. An early Glossy Ibis was at Back River, Mar. 28. Ten were sighted during the period Apr. 1 to May 28 at Sandy Pt., with a maximum of 6 on the latter date. Another was seen at Lily Pons, Frederick Co., from Apr. 8 through May 6 by several observers.

Waterfowl. A Brant was out of place at Crisfield, May 18 (Armistead). DuMont found a Greater White-fronted Goose among a flock of 6,000 Canada Geese near Kent I., Mar. 12. Armistead's count of Snow Geese at Blackwater was 530 with the ratio of blues to whites being 2.5:1. A drake Eurasian Wigeon remained at Deal Island WMA Mar. 4 through 24 (Rowlett). Some high counts of migrant ducks this spring were 85 Redheads in Baltimore harbor, Mar. 14 (Ringler), 150 Ring-necked Ducks at Loch Raven, Mar. 29 (Blom), 12,000 Lesser Scaup in Hawk Cove and the mouth of the Gunpowder River, Mar. 30 (Ringler), 2,000 scoters of all three species at Hooper I., Mar. 19, and 10,000 scoters and 500 Red-breasted Mergansers off the mouth of South River at Thomas Pt. Light, Mar. 25 (Wierenga). Wierenga also heard about 46 flocks of Oldsquaw migrating over Annapolis after dark on Mar. 28. The Harlequin Duck previously reported at the Naval Academy remained through Mar. 19. A female King Eider was studied at Ocean City Inlet by many people during the MOS convention, May 14.

Diurnal Raptors. Once again we have a comprehensive survey of the raptor migration at Sandy Pt. and Annapolis. Here are Wierenga's data for the entire season:

<u>Species</u>	<u>Total</u>	<u>Earliest</u>	<u>Latest</u>	<u>Highest Counts</u>
Turkey Vulture	347	2/22	5/30	42 on 3/30, 30 on 4/20
Black Vulture	18	3/17	4/20	5 on 3/31
Sharp-shinned Hawk	883	3/11	5/25	220 on 4/24, 191 on 4/29
Cooper's Hawk	23	4/8	5/10	5 on 4/20 and 4/21
Red-tailed Hawk	111	2/21	5/21	19 on 3/15, 12 on 3/17
Red-shouldered Hawk	27	3/11	4/29	4 on 3/15
Broad-winged Hawk	797	3/31	6/1	182 on 5/18, 166 on 4/21
Bald Eagle	5	4/21	5/1	3 on 4/29
Northern Harrier	89	3/19	5/10	25 on 4/20, 14 on 4/24
Osprey	244	3/18	5/30	81 on 4/20, 26 on 3 dates
Merlin	8	4/20	4/29	4 on 4/29
American Kestrel	325	2/24	5/25	34 on 4/1, 25 on 3/19
Total	2,874	2/21	6/1	

Table 2. Spring Departure Dates, 1978

Species	Median 10-yr 1978	Garr	Al/W	Fred	Carr	Balt	Ha/C	Howa	Mont	PrGe	AnAr	Char	C/SM	K/QA	Caro	Talb	Dorc	LES
Common Loon	5/ 8 5/ 7	6/ 6	5/ 6	5/20	0	5/23	5/ 6	5/ 7	5/ 6	5/ 7	5/30	5/ 6	5/ 6	5/ 6	0	6/20	6/ 4	6/ 2
Horned Grebe	5/ 2 5/ 6	4/26	5/ 6	0	4/15	5/ 7	0	5/ 6	5/ 6	0	4/27	5/ 6	5/ 6	5/ 6	0	5/ 6	5/ 6	5/ 6
Double-cr. Cormorant	5/17 6/ 5	0	0	0	0	6/20	0	0	6/ 3	0	6/ 3	5/ 6	5/ 6	5/ 6	6/10	6/12	6/ 7	6/ 7
Whistling Swan	5/ 2 5/ 6	5/ 6	5/ 6	3/31	4/ 8	5/ 6	--	3/30	--	5/10	5/ 9	--	3/28	5/ 7	6/ 4	5/ 6	--	--
Canada Goose	5/ 5 5/ 6	5/ 6	5/ 6	5/31	4/16	5/20	5/ 6	5/ 6	5/ 6	6/ 1	5/ 9	5/ 6	5/ 6	5/22	6/10	5/11	--	5/ 6
Gadwall	-- 5/ 6	0	0	0	0	5/ 6	5/ 6	5/20	0	0	4/10	0	0	5/12	0	5/ 6	--	--
Common Pintail	5/ 3 4/ 3	4/ 5	5/ 6	0	4/ 8	3/21	0	0	0	0	3/23	0	0	3/22	4/ 3	0	--	--
Green-winged Teal	5/ 1 4/27	4/ 9	5/ 6	0	3/19	4/ 7	0	5/20	0	5/ 6	4/17	0	0	5/26	0	0	5/13	3/ 4
American Wigeon	4/27 5/ 6	5/ 6	0	0	4/ 8	5/ 6	0	5/ 6	0	0	4/10	0	0	5/ 6	4/ 3	0	6/ 5	--
Northern Shoveler	4/15 4/12	0	0	3/13	4/ 8	3/22	0	0	4/ 2	0	5/ 6	0	0	4/27	4/12	0	5/ 6	5/ 6
Redhead	4/ 9 4/ 3	3/29	0	0	3/19	4/ 7	0	0	0	0	0	0	0	4/14	0	5/ 6	0	3/24
Ring-necked Duck	4/14 4/16	5/ 6	0	4/ 8	0	5/ 6	0	4/ 8	0	0	4/10	4/16	0	5/ 6	4/29	0	0	3/ 4
Canvasback	4/16 4/15	5/ 6	0	3/27	0	3/30	0	4/15	0	3/30	5/ 6	5/ 6	4/ 5	5/ 6	0	--	4/ 9	5/29
Lesser Scaup	5/ 1 5/ 6	5/19	5/ 6	4/ 8	0	5/ 8	0	5/24	0	3/30	5/ 6	5/ 6	5/ 6	5/ 6	5/12	6/ 6	5/ 6	5/ 7
Common Goldeneye	4/28 4/10	0	3/ 4	0	0	3/28	0	0	0	0	4/10	0	0	5/ 6	0	--	6/ 4	--
Bufflehead	5/ 2 5/ 8	6/ 1	5/19	3/22	4/ 8	5/20	0	5/12	0	0	6/ 4	5/ 6	5/ 6	5/ 8	0	5/11	5/ 6	5/ 7
Oldsquaw	4/18 4/18	4/ 7	5/ 6	0	4/15	4/ 4	0	0	0	0	5/ 8	0	5/ 6	4/18	0	5/20	4/ 9	--
White-winged Scoter	-- 4/25	0	0	0	0	2/11	0	0	0	0	4/13	0	0	5/ 6	0	5/ 6	3/19	5/14
Surf Scoter	-- 5/ 6	--	0	0	0	0	0	0	0	0	5/ 6	0	0	4/13	0	5/23	3/19	6/ 6
Black Scoter	-- 5/ 8	0	0	0	0	0	0	0	0	0	4/23	0	0	0	0	5/23	3/19	5/29
Ruddy Duck	5/ 4 5/ 6	4/ 8	5/ 6	0	0	5/17	0	0	0	0	5/ 6	0	5/ 6	5/ 7	0	5/ 6	5/ 6	--
Hooded Merganser	4/20 4/20	5/ 6	5/ 6	3/15	4/15	4/25	0	4/ 8	4/ 2	5/ 9	0	0	0	4/13	0	0	4/25	0
Common Merganser	4/23 4/26	5/ 6	3/ 4	4/ 3	4/15	5/ 6	0	0	5/ 6	0	0	0	0	3/11	0	0	5/ 6	0
Red-br. Merganser	5/ 5 5/ 9	6/10	5/ 6	0	4/15	5/11	0	5/26	0	0	5/26	0	5/ 6	5/ 6	0	6/ 2	4/ 9	--
Rough-legged Hawk	-- 3/18	0	0	0	0	2/23	0	3/18	0	0	1/27	0	0	2/ 3	4/ 4	0	4/ 9	3/18
American Coot	5/ 4 5/ 6	6/ 6	5/ 6	5/31	3/19	5/ 6	0	0	0	5/ 6	4/23	0	5/ 6	4/22	0	4/22	5/ 6	5/ 6
Semipalmated Plover	5/27 5/23	5/ 6	0	5/ 6	0	5/29	5/ 6	0	0	0	6/ 4	0	0	5/21	0	5/21	6/ 4	6/ 1
Black-bellied Plover	5/23 5/23	5/10	0	0	0	5/20	0	0	0	5/ 6	5/30	0	0	5/12	0	5/26	6/ 4	6/ 1
Greater Yellowlegs	5/ 9 5/ 6	5/ 6	5/ 6	5/10	0	5/20	5/ 6	5/ 6	0	5/ 6	5/26	5/ 6	5/ 6	6/ 2	4/27	5/10	5/13	5/30
Lesser Yellowlegs	5/ 8 5/ 7	5/10	5/ 6	5/10	4/15	5/12	5/ 6	0	5/ 6	5/ 6	5/28	5/ 6	5/ 6	5/ 6	4/27	5/10	5/13	5/ 8
Solitary Sandpiper	5/12 5/ 7	5/ 7	5/ 6	5/19	4/15	5/22	5/ 6	5/18	5/ 6	5/10	5/24	0	0	5/19	4/17	5/ 6	5/13	5/ 6
Spotted Sandpiper	5/21 5/22	5/30	--	5/22	--	--	--	5/20	--	5/25	5/28	--	--	5/22	--	5/19	--	5/14
Ruddy Turnstone	5/29 6/ 2	5/10	0	0	0	0	0	0	0	0	5/24	0	0	0	0	6/10	6/ 4	6/ 2
Common Snipe	5/ 5 5/ 6	5/ 6	5/ 6	5/10	4/15	5/ 6	5/ 6	5/ 6	5/ 6	5/ 6	5/ 9	--	4/ 6	5/ 6	4/12	5/ 6	5/ 6	--
Short-b. Dowitcher	5/23 5/19	0	5/ 6	0	0	5/ 6	0	0	0	0	5/27	0	0	5/19	0	5/14	5/27	5/30
Red Knot	-- 6/ 1	0	0	0	0	0	0	0	0	0	5/24	0	0	0	0	6/ 2	6/ 4	5/30
Sanderling	-- 5/12	0	0	0	0	6/ 6	0	5/ 6	0	0	5/16	0	0	0	0	0	0	5/ 8
Semipalmated Sandpiper	5/26 5/12	5/10	0	0	0	6/ 6	5/ 6	5/12	5/ 6	5/ 6	6/ 9	0	5/ 6	5/24	5/ 6	5/19	6/ 4	6/ 7
Least Sandpiper	5/18 5/ 8	5/10	5/ 6	6/ 6	0	5/29	5/ 6	5/ 6	5/ 6	5/ 6	6/ 9	0	0	5/26	5/ 6	5/19	5/27	5/31
White-rump. Sandpiper	-- 5/14	0	5/ 6	0	0	5/ 6	0	0	0	0	5/24	0	0	5/24	0	0	5/13	5/14
Pectoral Sandpiper	5/ 7 5/ 6	0	5/ 6	5/ 6	0	5/ 6	5/ 6	0	0	0	--	0	0	5/ 6	5/ 6	0	5/ 6	5/ 6
Dunlin	5/22 5/26	5/ 6	0	0	0	5/26	0	0	0	0	6/ 3	0	0	5/12	0	5/23	5/27	6/ 1
Bonaparte's Gull	5/ 4 5/ 6	5/ 7	5/ 6	0	0	5/20	--	0	5/ 6	0	--	0	0	0	0	4/24	4/ 9	5/ 6
Black Tern	-- 5/20	0	--	0	0	6/ 6	0	0	--	0	5/20	0	0	0	0	0	0	5/ 7

Species	Median 10-yr 1978			Garr	Al/W	Fred	Carr	Balt	Ha/C	Howa	Mont	PrGe	AnAr	Char	C/SM	K/QA	Caro	Talb	Dorc	LES
Yellow-bell. Sapsucker	5/ 3	5/ 6		6/ 8	5/ 6	--	--	5/ 6	--	5/ 6	--	5/ 6	5/ 6	--	--	5/ 2	--	4/ 3	--	5/ 6
Red-breasted Nuthatch	5/ 5	5/ 8		5/12	5/ 6	5/18	0	5/10	--	5/19	5/11	5/ 8	5/24	5/ 6	5/ 6	5/ 6	5/10	5/ 6	4/29	5/ 6
Brown Creeper	4/24	5/ 6		--	5/ 6	4/17	0	5/ 6	--	5/ 6	5/11	4/11	5/ 3	5/ 6	4/15	5/ 6	5/17	6/ 3	--	--
Winter Wren	4/26	5/ 6		5/21	5/ 6	0	0	5/29	0	5/ 6	4/23	0	5/ 6	0	0	4/25	0	0	0	0
Hermit Thrush	5/ 4	5/ 6		--	5/ 6	--	0	5/24	5/ 6	5/ 6	5/10	5/ 6	5/11	--	5/ 3	5/ 6	4/11	5/ 6	5/ 3	--
Swainson's Thrush	5/24	5/26		5/26	--	--	0	5/26	5/19	5/18	6/ 1	5/30	6/ 1	--	--	5/22	5/17	--	5/13	5/28
Gray-cheeked Thrush	5/23	5/22		0	5/12	--	0	5/27	0	5/22	5/29	--	5/28	0	5/22	5/22	0	0	0	0
Veery	5/17	5/19		--	--	--	0	5/28	5/ 9	5/18	5/29	--	5/27	--	5/ 9	5/19	5/11	--	--	--
Golden-cr. Kinglet	4/16	4/17		5/ 9	5/ 6	3/30	0	4/10	--	--	4/23	--	--	--	--	4/10	--	--	--	--
Ruby-crowned Kinglet	5/ 6	5/ 6		5/18	5/ 6	4/ 6	0	5/11	5/ 6	5/ 6	5/ 7	5/ 8	5/10	--	5/ 9	5/12	5/ 6	5/ 6	4/29	5/ 6
Water Pipit	5/ 4	5/ 6		5/ 4	5/ 6	5/ 6	0	5/10	0	0	0	0	5/28	5/ 6	0	5/ 6	5/ 6	5/ 6	5/ 6	0
Solitary Vireo	5/ 6	5/10		--	--	5/27	0	5/10	--	5/ 6	5/ 6	5/ 9	5/13	0	--	5/22	5/10	0	0	0
Tennessee Warbler	5/18	5/24		5/26	5/21	0	0	5/30	0	--	--	5/19	5/11	0	0	5/26	0	0	0	0
Nashville Warbler	5/11	5/15		5/26	0	0	0	5/18	0	5/15	--	5/11	5/24	0	0	5/10	5/11	0	0	0
Magnolia Warbler	5/21	5/21		--	--	5/21	0	5/28	0	5/ 8	5/28	5/21	5/28	0	5/ 9	5/26	5/20	0	0	5/ 6
Cape May Warbler	5/15	5/16		5/19	0	0	0	5/18	5/ 6	5/13	--	5/19	5/24	0	0	5/12	5/ 6	0	0	0
Black-thr. Blue Warb.	5/15	5/13		--	5/21	5/ 6	0	6/11	0	5/11	5/21	5/10	5/24	0	0	5/19	5/10	0	5/13	5/ 6
Yellow-rumped Warbler	5/13	5/16		5/12	--	5/16	--	5/19	5/ 6	5/12	5/15	5/16	5/24	--	--	5/19	5/11	--	5/13	--
Black-thr. Green Warb.	5/14	5/18		--	5/21	5/ 6	0	5/18	0	5/11	5/20	5/ 9	5/24	0	5/ 9	5/19	0	0	0	0
Blackburnian Warbler	5/15	5/17		--	5/21	5/21	0	5/17	5/ 6	5/16	--	5/16	5/24	0	0	5/26	5/11	0	0	5/ 8
Chestnut-sided Warb.	5/16	5/17		--	--	0	0	5/20	5/ 6	5/11	5/13	5/17	5/11	0	0	6/ 7	5/19	0	0	5/14
Bay-breasted Warbler	5/20	5/25		5/25	5/21	0	0	5/27	0	0	5/20	0	5/24	0	0	5/26	0	0	0	0
Blackpoll Warbler	5/31	5/28		0	5/21	5/27	0	6/ 2	0	6/ 1	5/28	5/29	5/30	5/23	5/30	5/26	5/23	5/26	5/13	5/31
Palm Warbler	5/ 4	5/ 6		5/ 6	5/ 6	0	0	5/10	0	5/ 6	5/10	5/ 6	5/ 3	0	0	5/ 9	4/14	0	0	5/ 6
Northern Waterthrush	5/19	5/10		--	--	5/ 6	0	5/29	5/ 6	--	6/ 1	5/21	5/27	0	0	5/12	5/ 7	5/ 7	0	5/ 6
Mourning Warbler	5/26	5/25		0	5/12	0	0	5/25	0	0	6/ 1	5/27	5/24	0	0	0	0	0	0	0
Wilson's Warbler	5/24	5/27		0	0	5/27	0	5/27	0	5/13	5/27	5/ 9	5/28	0	5/24	5/26	0	0	0	0
Canada Warbler	5/26	5/24		--	--	5/11	5/25	5/28	5/13	5/17	5/30	5/23	5/26	0	5/22	6/ 7	5/25	0	5/13	0
American Redstart	5/30	5/31		--	--	5/21	--	--	5/19	--	6/ 5	6/ 1	6/ 4	--	6/10	5/26	5/30	--	5/27	6/ 1
Bobolink	5/15	5/15		--	--	--	0	6/ 2	5/ 6	5/24	--	5/16	6/ 9	--	5/10	5/ 9	5/12	--	5/13	5/31
Rusty Blackbird	5/ 6	5/ 6		5/ 7	5/ 6	5/ 1	0	5/ 6	0	5/ 6	0	5/10	0	0	0	5/ 6	0	0	4/25	0
Rose-br. Grosbeak	5/16	5/20		--	--	5/12	0	6/ 6	--	5/11	5/27	5/22	5/24	--	--	5/10	5/20	--	--	5/ 8
Evening Grosbeak	5/ 5	5/ 6		5/26	5/ 6	5/ 6	0	5/13	5/ 6	5/ 7	5/ 7	5/ 8	5/13	5/ 6	5/ 6	5/19	5/ 6	4/24	5/ 3	5/ 6
Purple Finch	5/ 5	5/ 8		--	5/ 6	5/ 6	0	5/20	--	5/ 6	--	5/13	5/13	5/ 6	4/ 1	5/10	5/11	--	--	--
Common Redpoll	--	3/23		5/ 6	2/21	3/28	4/ 8	4/16	--	3/19	--	3/29	3/23	0	0	3/13	0	3/ 5	0	3/ 4
Pine Siskin	5/ 5	5/ 6		5/ 6	5/ 6	3/13	0	6/10	--	5/ 6	5/ 6	6/ 1	5/24	--	3/10	5/ 6	5/16	4/24	--	5/ 6
White-wg. Crossbill	--	--		2/20	0	0	0	3/17	0	0	0	0	0	0	0	1/13	0	0	0	0
Savannah Sparrow	5/ 5	5/10		--	--	5/10	0	5/12	--	5/ 6	--	5/10	5/13	--	4/24	5/ 6	5/ 6	5/ 6	5/13	6/ 1
Northern Junco	5/ 2	5/ 6		5/30	5/ 6	5/ 6	4/27	5/ 6	5/ 6	5/ 6	5/ 6	5/28	5/ 7	5/ 6	4/11	5/ 7	5/11	--	4/ 9	4/25
Am. Tree Sparrow	3/27	3/24		3/27	5/ 6	4/ 8	--	3/29	--	3/17	--	3/27	3/29	--	3/20	3/11	--	3/ 5	3/19	3/ 4
White-crowned Sparrow	5/10	5/10		5/11	5/ 6	5/10	--	5/15	5/ 6	5/10	5/11	5/ 6	5/ 9	5/ 6	5/ 6	5/12	5/11	5/ 6	5/13	--
White-thr. Sparrow	5/12	5/11		5/11	5/ 6	5/10	4/27	5/26	5/ 9	5/ 6	6/ 1	5/21	5/25	5/ 6	5/11	5/20	5/20	5/ 6	5/14	5/14
Fox Sparrow	4/ 6	4/ 5		5/ 6	--	3/31	--	4/23	4/ 1	5/ 6	4/15	3/18	4/ 9	--	3/10	3/ 5	--	--	--	--
Lincoln's Sparrow	--	5/24		5/26	--	0	0	5/12	0	5/11	5/26	0	5/24	0	0	0	0	0	0	0
Swamp Sparrow	5/ 8	5/ 6		--	5/ 6	5/10	--	5/30	5/ 6	5/ 6	5/21	5/ 6	5/11	--	--	5/ 6	5/ 6	5/ 6	5/ 3	5/29

The beginnings of a regular hawk watch in eastern Baltimore Co. with several days of observation along the bayfront yielded these totals for the three best days.

<u>Species</u>	<u>Apr. 1</u>	<u>Apr. 29</u>	<u>Apr. 30</u>
Turkey Vulture	2	1	
Sharp-shinned Hawk	51	763	240
Cooper's Hawk		8	1
Red-tailed Hawk	6	28	5
Red-shouldered Hawk	4	8	
Broad-winged Hawk		340	
Northern Harrier	11	22	5
Osprey	3	41	6
Peregrine Falcon	1	2	
Merlin		1	
American Kestrel	78	35	12
Unidentified		47	3
Total	156	1,296	272

Apparently, a large number of hawks was grounded to the south of us by bad weather in late April. The 29th was a warm sunny day with southerly winds, producing the largest spring flight of Sharp-shinned Hawks seen in the State. Other record high counts for spring were the Broad-wings on the same day and the 81 Ospreys at Sandy Pt. Apr. 20. Consistent reporting from other localities could provide a significant insight into eastern raptor migration.

Individual observations in addition to these include a well-described Swallow-tailed Kite flying over Owings Mills, Baltimore Co., May 25 (James D. Smyth, Jr.), a Northern Goshawk near Naylor, Prince Georges Co., May 6 (R. M. Patterson), and record-early Broad-winged Hawks on Mar. 28 in Calvert County (Fales) and Mar. 31 at Sandy Pt. Single Golden Eagles were seen, with an immature near Deal Island WMA, Mar. 19 (DuMont), an adult over Severna Park, Anne Arundel Co., Apr. 22 (Mele), and an immature there the next day. Armistead found a high count of Bald Eagles in southern Dorchester County with 22 on Apr. 9. Sightings of Peregrine Falcons included one at Ocean City, Mar. 4 (DuMont), one at Back River, Mar. 25-26 (Rowlett, *et al.*), one at Black Marsh, Apr. 1, 2 at Assateague, Apr. 16 (DuMont), one at Lake Roland, Baltimore Co., Apr. 25 (Ringler, Stasz), a pair migrating over Black Marsh, Apr. 29, one at Assateague, Apr. 30 (Rowlett, Mele), and one at Little Orleans, Allegany Co., May 12 (Rowlett).

Gallinaceous Birds, Rails. Reports from western Maryland indicate that Ruffed Grouse suffered no apparent population loss from the severe winter weather and that Wild Turkeys fared rather poorly. A high count of Soras was 15 in south Dorchester County, May 6 (Armistead, Wilds). A record-early Black Rail was at the Elliott I. marsh, Apr. 14 (Rowlett). Others were found at Black Marsh, May 6, and Sandy Pt., May 19, both suggestive of breeding. A Purple Gallinule was near Upper Marlboro, May 30, the location at which this species bred in 1976.

Shorebirds. Two Black-necked Stilts were at Blackwater Refuge, May 13 (Armistead, *et al.*). Blackwater also attracted an American Avocet on Apr. 16 (DuMont). Probably the outstanding shorebird find of the season was the 52 breeding plumage American Avocets at Broadford Reservoir, Apr. 24, seen by Fran Pope. Not only was this the first Garrett County record, but by far the largest flock of this species ever seen in the State. This occurrence seems symptomatic of the very wet season we encountered. The numerous pools left by the excessive rains created excellent shorebird habitat in many locales. Rich Rowlett made several shorebird surveys in southeastern Worcester County during May and these are some of the interesting observations he made: 625 Semipalmated Plovers, May 14, 2,635 Black-bellied Plovers, May 14, 930 Ruddy Turnstones, May 14, 2,805 Short-billed Dowitchers, May 14, 412 White-rumped Sandpipers, May 8, and 2,025 Dunlins, May 14. All of these are record high counts. Other notes of interest are 5 Wilson's Plovers on Assateague, Apr. 30 (Rowlett, Mele); 2 Lesser Golden Plovers at Blackwater, Apr. 16 (DuMont) and 5 in Worton, Kent Co., Apr. 20 (Parks); Black-bellied Plovers away from the coast with 11 at Mountain Lake Sewage Lagoons, May 10, 98 at Bellevue, Talbot Co., May 22, and 27 at Smith I., rather late on May 29; 23 Whimbrels at Sandy Pt., May 6, and 7 there on May 24; 22 Upland Sandpipers near Buckeystown, Frederick Co., Apr. 23 (Rowlett); a record-early Solitary Sandpiper at Back R., Mar. 15 (Stasz, Blom); 750 Willets flying north over Sinepuxent Bay, Apr. 30 (Rowlett, Mele); and 2 Ruddy Turnstones at Mountain Lake Sewage Lagoons, May 10. Wilson's Phalaropes appeared in remarkable numbers, fortuitously on May 6 for many May count participants. On that day 3 were reported from Washington County, 2 each from Garrett and Worcester Counties, and 1 each from Anne Arundel, Baltimore, Frederick, and Howard Counties. Two were in Upper Marlboro, Prince Georges Co., May 9 (Patterson). Unusual on land were single Northern Phalaropes at Mountain Lake Sewage Lagoons, May 5, and in southeastern Worcester County, May 14. More appropriate were those counted off Ocean City: 121+ on Apr. 29, 26+ on May 6, and 55+ on May 7. Also seen on the pelagic trips were 211 Red Phalaropes on Apr. 15, 4,665 on Apr. 29, 548 on May 6, and 738 on May 7. Unusual in spring were 3 Long-billed Dowitchers at West Ocean City, May 13 and 14 (DuMont, Rowlett). There were 37 Red Knots at Sandy Pt., May 24, and another 160 at Ocean City, May 29 (DuMont). White-rumped Sandpipers appeared in good numbers in the bay area with 11 at Sandy Pt., May 5, and 13 in southern Dorchester County, May 6. Rather late were 20 Purple Sandpipers at Ocean City, May 29 (DuMont). Another unusual spring record was the Stilt Sandpiper at Blackwater, Apr. 28 (Rowlett). Rounding out the shorebird tally for this spring was a Reeve at Lily Pons, Apr. 26 (DuMont).

Jaegers, Gulls. Pomarine Jaegers seen off Ocean City on pelagic trips were one each on May 6 and May 28. Another was seen on a convention field trip to Assateague, May 13. Parasitic Jaegers seen offshore were 3 on May 6 and 2 on May 7. The large variety of wintering gull species remained into the spring. One Glaucous Gull stayed in the Back R. area through Mar. 28. Two were at the Pennington Landfill in Baltimore on Apr. 9. Two were seen off Ocean City on Apr. 15. One was at North Pt. Apr. 23. Finally, one at Sandy Pt. on May 14 and 15 established a new State departure record. Three Iceland Gulls were in the

Back R. area on Mar. 4 with at least one through Mar. 23. During the period Apr. 26 to May 4 there were 3 birds at Sandy Pt. The last Iceland Gull reported was in Baltimore harbor, May 6 (Resch). A Lesser Black-backed Gull was at Back R. through Apr. 27, while at Sandy Pt. an amazing 9 different birds appeared during the period Apr. 11 to June 9, another State departure record. An immature Thayer's Gull was seen on Back R. through Apr. 8. 165 Ring-billed were banded at Back R., Mar. 18. One of these was found dead in Nottawasaga, Ontario, Sept. 4. The last reports of a Mew Gull at Back R. were of an adult on Mar. 18 (Bob Augustine) and on Mar. 25 (DuMont, J. J. Danzenbaker). Two adult Black-headed Gulls visited Back R. with the first arriving on Mar. 13 and the second departing on Apr. 27. The two were periodically seen together. The first bird carried a metal leg band. No Black-headed Gulls are known to have been banded in North America, raising speculation on the origin of this bird. An adult Franklin's Gull was at Sandy Pt., May 22, and a different bird was there on May 24. Unusual in the mountains were 196 Bonaparte's Gulls on Deep Creek Lake, Apr. 24. The first Little Gull of the season was seen in Baltimore harbor, Mar. 26 (Rowlett), followed by one at Back R., Apr. 9 (Augustine) and 3 there on Apr. 16 (Blom), the last sighting in that area. One was off Ocean City, Apr. 15 and two were flying north past Sandy Pt., Apr. 23 (DuMont). Late Black-legged Kittiwakes seen off Ocean City were 8 on Mar. 4 and one on Apr. 29.

Terns, Skimmers, Alcids. A record-early Common Tern was at Sandy Pt., Apr. 1. Arctic Terns observed off Ocean City were 12 on May 6 and 2 on May 7. A rare Roseate Tern was at West Ocean City, May 29 (DuMont). Three Black Terns flying north off Assateague on Apr. 16 (DuMont) were also a record-early arrival. Armistead noted 9 Black Skimmers at Smith I., May 28, a large number in the bay. Alcids seen off Ocean City were 5 Razorbills on Mar. 4 and an incredible two adult Atlantic Puffins on May 7, two months later than any previously seen in Maryland waters.

Owls, Flycatchers. A total of 54 Barn Owls was heard migrating over Annapolis during the season with the most being 7 on Apr. 12. Four Long-eared Owls remained at Piney Run Park, Carroll Co. through Mar. 19 and 2 were still there through Apr. 23, an exceptionally late date though no evidence of breeding was found. Single Short-eared Owls were noted in Howard County, south of Sykesville, Mar. 7 (Blom), at Piney Run, Mar. 19 (Blom), and at Sandy Pt., Mar. 26 and Apr. 10. A Saw-whet Owl was found dead at Ft. McHenry in Baltimore on Mar. 31 (Bielenberg). The only Olive-sided Flycatchers seen were in Frederick Co., May 6, and in Hammel Glade Swamp, Garrett Co., May 24.

Ravens, Chickadees, Wrens. Unusually far east was a Northern Raven near Prettyboy Reservoir, Baltimore Co., May 6 (Kaestner). The Boreal Chickadee remained at Back R. through Apr. 23 after being banded on Mar. 11. A Winter Wren was still singing there on the late date of May 29.

Thrushes, Pipits, Warblers. An adult male Varied Thrush visited a feeder in Aberdeen, Mar. 5 to 12 (Graham). This appears to be the fourth State record. High counts of Water Pipits for the spring were 40 at Pleasant Valley, Garrett Co., May 4, and 86 at Sandy Pt., May 8. There

was a record-late departure at Sandy Pt. on May 28. The only Orange-crowned Warbler reported this season was in eastern Anne Arundel Co., May 13 (DuMont). Rowlett found a very high count of 100+ Bay-breasted Warblers at Little Orleans, Allegany Co., May 12. Two Kentucky Warblers in Pocomoke Swamp, Apr. 16 (DuMont) broke the State arrival record by 3 days. Quite rare in spring was a singing male Connecticut Warbler along Gunpowder Falls, Baltimore Co., May 6 (Resch). Mourning Warblers were exceedingly common at Adventure Sanctuary in Montgomery Co. where 25 were banded including 9 on May 22 (Margaret Donald). Meanwhile, Rowlett found 9 near Rocky Gorge Reservoir between May 22 and 26.

Icterids, Tanagers, Finches. High counts of Bobolinks were 1,450 at Sandy Pt., May 6, and 1,500+ at Greensboro, Caroline Co., May 10-12 (Bishop). Single adult male Yellow-headed Blackbirds were reported in Chestertown, Kent Co., Mar. 1 and 2 (Gruber), near Churchville, Harford Co., Mar. 12 (Rowlett), and at Black Marsh, Mar. 13. Lingerin Brewer's Blackbirds were two females near Deal I., Mar. 19 (DuMont), and a male in the median strip of I-83 in northern Baltimore Co., Apr. 30 (Kaestner). A male Western Tanager was at the feeder of Mrs. Phoebe Kelley in Takoma Park, Apr. 22-29, for the sixth State record. A pair of Dickcissels appeared at the feeder at Ft. McHenry through May 6 (Bielenberg) and a male was at Sandy Pt., May 24. An enormous number of 951 Evening Grosbeaks was counted by observers in Allegany Co., May 6, as northern finches remained late into the season. The last of the Common Redpolls were in Baltimore Apr. 16 (Slaughter) and 2 in Kitzmiller, Garrett Co., May 6. Notable Red Crossbills were 7 in Worcester County, May 6 (Mark Hoffman), 7 at Ewell, Smith I., May 28, and 2 there on May 29. At least 6 White-winged Crossbills were in Ruxton, Baltimore Co., Mar. 15-17 (Ann Wilder). A high count of Savannah Sparrows was 75 at Sandy Pt., Apr. 30. Two Henslow's Sparrows were singing on territory near Elliott I. Apr. 9 (Armistead), and a Lark Sparrow was near the Mountain Lake Sewage Lagoons, May 6. The latest Lapland Longspurs reported were 3 at Ocean City, Mar. 4 (DuMont), and 4 in northern Baltimore County, Mar. 5-11 (Ringler, *et al.*). DuMont also found 20 Snow Buntings with the Ocean City birds on Mar. 4, while on the same date in northern Baltimore County Kaestner found another 20.

Addenda - To the list of White Ibis records that appeared in Vol. 33, No. 4 of *Maryland Birdlife* add one seen flying over the University of Maryland, College Park, Prince Georges Co., July 26, 1977, by Sam Droege. Curlew Sandpiper is a species that remains on the Maryland hypothetical list for lack of corroborating evidence. However, another sight record has been received, this from Eddie Slaughter of an immature or winter plumage bird at Ocean City, Oct. 15, 1977. The details are satisfactory for a bird that can be extremely difficult to identify at this time of year. Likewise for a Ruff, also seen by Mrs. Slaughter at Ocean City on Oct. 19, 1977, which appears to be the latest record for the State.

SECOND RECORD OF THE LE CONTE'S SPARROW IN MARYLAND

Richard A. Rowlett

I briefly observed a Le Conte's Sparrow (*Ammospiza leconteii*) in a small marshy fill at the west end of 120th Street, Ocean City, Worcester Co., Maryland, on October 23, 1977. The bird was flushed from a low dike vegetated with a dense mat of Spike Grass (*Distichlis spicata*), Salt Water Cordgrass (*Spartina patens*), and some small shrubs including Bayberry (*Myrica cerifera*), and others unidentified.

I called to Mark Florip, Betty Phinney, Bob Smart, and Steve Whitcomb, with whom I was birding, to help search for the Le Conte's, which had flown into the fill. Steve and I flushed the bird several times, and we all agreed that it was smaller and appeared lighter than several Sharp-tailed Sparrows (*Ammospiza caudacuta*) also present. Only I was able to study detailed field marks when the bird was about 4 meters from me on the ground for about 8 seconds, and for shorter periods as it skulked through the tops of several clumps of extremely dense, dried weeds resembling "tumbleweeds," which stood about 1 meter high in 5 to 10 cm of standing rainwater.

The head was small and round, and the crown possessed a broad whitish median stripe, bordered by two heavy blackish stripes that contained several very fine whitish "pin stripes." Rich yellowish buff extended over the eye from the base of the bill to well back of the conspicuous pearl gray ear patch, which was bordered above and posteriorly by a bold black "chevron." Bright yellowish buff was noted on the throat, lower sides of the face, sides, and flanks, and several fine black streaks were present on the sides of the breast, sides, and flanks. The back was pinkish tan, neatly streaked with white and black. The back and crown pattern contrasted strongly with the pinkish tan hind neck or collar, but because of obscuring vegetation, the fine pinkish streaks could not be seen.

Bob cautioned that immature Grasshopper Sparrows (*Ammodramus sava-narium*) are often mistaken for Le Conte's. When I compared study skins of all North American *Ammospiza* and *Ammodramus* sparrows in the U. S. National Museum, Washington, D. C., on October 26, however, my feeling that the bird was unquestionably a Le Conte's was reinforced. The crowns of fall Le Conte's and Grasshoppers can be almost identical, but the extensive yellowish buff over the eye is unique to Le Conte's and Sharp-taileds. Some Grasshoppers may have rich buff above and forward of the eye, extensive yellow-buff on the underparts with variable degrees of streaking, and a pinkish tan collar. However, none possessed the pearl gray ear patch or bold black "chevrons" that are conspicuous on Le Conte's. Sharp-taileds are larger, darker backed, have a solid dark crown, and uniform purplish gray collar.

The Le Conte's shunned the shorter, more sparse *Spartina* unless flushed there at last resort. It flew weakly, much like a Sharp-tailed on whirring wings, usually for less than 15 meters, then dropped like a stone into the vegetation. After being flushed several times, it became

increasingly difficult to find, as it preferred to run on the ground. The bird was observed intermittently for about 10 minutes. We searched for 45 additional minutes at noon, then again at sunset, and Steve and I looked for it on the following morning without success.

Several fall and winter records of Le Conte's Sparrows have been reported in the southeastern coastal states in recent years. The only previous Maryland record was of a bird that wintered at Ocean Pines, Worcester Co., December 27, 1974, to February 8, 1975 (Klimkiewicz, *Md. Birdlife* 31:16-17).

P. O. Box 579, Ocean City, Md.

1980

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For ornithological research in Maryland.

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COMING EVENTS

- Nov. 1 BALTIMORE Tree Walk at Cylburn, 10 a.m. Gordon L. Filbey.
 2 ANNE ARUNDEL Monthly Meeting. "Birding in Antarctica" by Claudia Wilds. Library, West St., Annapolis, 8 p.m.
 3 BALTIMORE Trip to Blackwater Refuge. Meet headquarters, 9:45.
 3 HOWARD Trip to Triadelphia Reservoir. Meet 7:30 a.m. at Grempler Realty, Little Patuxent Pkwy, Columbia.
 3 MONTGOMERY Local Duck Hunt. Meet 9 a.m., Georgetown Reservoir on MacArthur Blvd. Ray Prybis, leader.
 3-4 PATUXENT Trip to Irish Grove Sanctuary. Sam Droege 422-2316.
 6 BALTIMORE Ornithology Course, Field Identification of Maryland Birds: Waterfowl & Rails. Cylburn, 8-10 p.m.
 8 HOWARD Monthly Meeting. "Geology" by Nick Short. Grempler Realty Bldg., Little Patuxent Pkwy, Columbia, 7:45.
 10 BALTIMORE Trip to Gunpowder R., Phoenix. Towson Plaza, 7 a.m.
 10 ANNE ARUNDEL Trip to Blackwater Refuge (with optional extension to Chincoteague, Nov. 11). Anglers, US50, 7:30 a.m.
 10 PATUXENT Trip to Blackwater Refuge. Paul Bystrak, 923-6875.
 11 HOWARD Trip, Geology of Howard Co. Meet Gremplers, 1 p.m.
 15 MONTGOMERY Monthly Meeting. Margaret & Morrill Donnal & Ed Smith, Banding in Panama. Perpetual Bldg, Bethesda, 8.
 16 CAROLINE Monthly Meeting. Galapagos Islands, Ed Unger. St. Luke's Methodist Church, 5th & Franklin, Denton, 7:30.
 17 ANNE ARUNDEL Trip to Sandy Point. Meet Anglers, US 50, 7:30.
 17 BALTIMORE Trip to Piney Run, Carroll Co. Meet Carrolltowne Shopping Center, Rt. 26, Eldersburg, 8 a.m.
 17 HOWARD Bus Trip to Bombay Hook & Little Creek, Del. 7:30. Register with Howard County Recreation and Parks.
 18 MONTGOMERY Trip to Sandy Pt. St. Park. Meet Parking Lot, 7:30.
 21 ALLEGANY Monthly Meeting. "Dolly Sods Flora and Fauna" by Dr. Richard Johnson. Board of Education, Cbld, 7:30.
 23-25 MONTGOMERY Outer Banks Weekend, Hatteras, N.C. Call 333-5769.
 24 BALTIMORE Trip to Eastern Neck Refuge & Remington Farms. Meet at wharf in Rock Hall, 10 a.m. Rodney Jones, leader.
 25 BALTIMORE Come-As-You-Are Tea. Birds, Plants & Amphibs of So. Appalachians by Krishnamoorthys. Towson Libr, 2:45.
 27 PATUXENT Backyard Wildlife Habitat Program. Craig Tufts. St. Philips, 6th & Main Sts., Laurel, 7:45 p.m.
 30 BALTIMORE Audubon Wildlife Film "Wilderness Alberta" by Albert Karvonen. Dumbarton Jr. High, York Road, 8 p.m.
 Dec. 1 HOWARD Trip to Seneca St. Park. Meet Grempler, 7 a.m.
 2 MONTGOMERY Trip to Blackwater Refuge. Meet Bowie Parking Lot, Rt. 197, north side of US 50, 7 a.m. J. Swinebroad.
 4 BALTIMORE Ornithology Course, Hawks, Owls, Gamebirds. See Nov. 6.
 7 ANNE ARUNDEL Monthly Meeting. "Birds of India & Nepal" by Dr. Don Messersmith. Anne Arundel Library, West St, Apls, 8.
 7 ALLEGANY Audubon Wildlife Film "Song of the Northern Prairie" Allen J. King. Allegany Community College theater, 8.
 9 BALTIMORE Trip to Baltimore Harbor. Meet So. Balto. Gen. Hosp. south parking lot off Hanover St., 8 a.m.
 13 HOWARD Monthly Meeting, "Cliffs of Calvert Co" Grempler, 7:45.
 15 ANNE ARUNDEL Trip to Gibson Is., 8 a.m., half day. Ron Amoss.

1979 CHRISTMAS BIRD COUNT SCHEDULE

Members are invited to participate in as many of these counts as they wish, but please contact the compilers well ahead of time so they can plan the most efficient coverage of their areas. The National Audubon Society charges \$1 for each observer on each count to help cover cost of publication of their Christmas Bird Count issue of *American Birds*.

Dec. 15	DENTON	A. J. Fletcher, Route 1, Box 201, Denton	479-1529
15	GARRETT COUNTY	Mrs. Wm. Pope 334-4908, Danny Bystrak	776-8020
16	CATOCTIN MT.	Dr. John W. Richards, Emmitsburg	447-6243
16	SENECA	Dr. Wm. Oberman, 4100 W St., N.W., D.C.	333-6315
16	LOWER KENT	Mrs. Edward Mendinhall, R.D.2, Chestertown	778-0826
18	PORT TOBACCO (or Dec. 19 in case of rain)	Danny Bystrak	776-8020
22	LIBERTY RESERVOIR	Rick Blom 444-5360, or Bob Ringler	655-5738
23	BOWIE	Bob Patterson, 12601 Buckingham Dr., Bowie	262-2459
26	BLACKWATER	C. S. Robbins, 7900 Brooklyn Br.Rd, Laurel	725-1176
27	CRISFIELD	Charles Vaughn, 1306 Frederick, Salisbury	742-7221
28	OCEAN CITY	C. S. Robbins, 7900 Brooklyn Br.Rd. Laurel	725-1176
29	BALTO CANYON	Pelagic Count. R.Rowlett, PO Box 579, O.City	289-4296
29	CHINCOTEAGUE	Fred R. Scott, 115 Kennondale, Richmd	804-282-2666
29	TRIADELPHIA	Danny Bystrak, 12123 Dove Circle, Laurel	776-8020
29	ALLEGANY CO.	John Willetts, Rt. 3, Box 243, Frostburg	689-3202
30	ANNAPOLIS	Hal Wierenga, 1216 Tyler Ave., Annapolis	268-1674
30	ELKTON	Joel Citron, 2003 Ferndale, Wilmington	302-475-8773
31	PATAPSCO	(replacing BALTIMORE) Bob Ringler	655-5738
Jan. 1	POINT LOOKOUT	Ernest Willoughby, Lexington Park	994-0709

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MARYLAND BIRDLIFE

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